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Original Lectures.

ARTICLE I.

STONE IN THE BLADDER. A Clinical Lecture delivered at the College of Physicians and Surgeons of New York, by Dr. R. F. WEIR, Lecturer of Diseases of the Genito-Urinary Organs.

What I have to say to-day is on the subject of stone. I have already shown you the production of ammonia in alkaline urine and how the changed urine allows the earthy salts to be deposited, which, uniting with the mucus of the bladder, may result in the formation a calculus. This form of stone may be called the inflammatory stone. But there are calculi which may arise from a urine too heavily laden with salts, as is seen in the summer time or when we catch cold, when the water and the phosphates are often thrown down as a red, or pinkish, deposit. We are more likely, however, to have this taking place in the kidney than in the bladder. There are, besides the usual constituents of the urine, certain other substances, such as xanthin and cystine, which occasionally constitute the nucleus of a calculus, but of all

the various salts and organic deposits, uric acid and its compounds are by far the most frequent nuclei of stone.

Some years ago, an analysis of the nuclei of some sixty-two cases of stone was made by Mr. Carter, at that time a surgeon of India. He found that out of the sixty-two calculi, thirty-four were formed of urates; twenty-one of oxalates; seven of uric acid, pure. This was in India. When he came to England he then made another analysis, but this proportion did not obtain there, the uric acid compounds constituting 71 per cent. of all the stones, and the oxalates going down in the scale to 29 per cent., as against 56 per cent. uric acid compounds to 44 per cent of oxalates, in India. It is evident that the difference is owing to a difference in diet, the articles of food in India being largely farinaceous and thus producing more oxalates of lime.

Why then, if we are subject to deposits of salts such as these in the bladder, do we not all have stone? The fact that these deposits go to the formation of stone is not the only reason. Another condition is necessary. Carter found some peculiar rhomboidal crystals of urates and oxalates which he had not seen before, which were explained by the researches of Messrs. Ord and Ranney. They found that such submorphous or molecular forms of crystallization resulted from the presence of a certain gluey or colloid material in the bladder. They could be formed by placing two solutions, one of oxalate of potash, one of chloride of calcium, in a test tube, separated by a solidified solution of gelatine, when in the gelatine solution the same peculiar form of crystallization were to be seen which he had found in the urine, in the presence of the colloid or gelatinous matter, so he came to the conclusion that the presence of this colloid material in the bladder was essential to the production of a stone.

This tells us why these conditions occur in one kidney and not in another and why it is that calculi occur so frequently in early life (the most common period, except in adults past the age of 55 the subjects of bladder inflammation). Children are more apt to have temporary congestion of the kidneys, and when this takes place, this gluey material is poured out and we sometimes find, if we examine the urine, hyalin tubular casts, consisting of their colloid matter—casts, however, which are not of much import-

tance luckily. When this colloid material, entangling some salts, happens, usually a healthy stream of urine breaks it down and washes it away. However, sometimes the nucleus may stay and grows into a calculus of increased size. When such a nucleus does take up its residence, either in the kidney or in the bladder, the inflammation which it excites as a foreign body causes an increased secretion of mucus, which, mingling with the urine, induces fermentation. The urine then becomes alkaline, and the earthy phosphates are deposited around the nucleus, causing the whitish layer so often seen in calculi. Here, however is a calculus in the kidney which is quite unique. It is a cystine one, weighing 175 gr. Cystine calculi are rare. This constituent of urine differs from the others, in that it has sulphur in it, which the others have not. It is this which gives it its peculiar character. When cut open such a calculus is soft, greasy, yellowish in color and fractures easily.

When a stone is formed in the kidney it may remain there for years, or it may ulcerate into or out of the pelvis, of the kidney, or it may stay in the ureter or get into the bladder, growing very large sometimes in both localities. The largest on record, found in the bladder, weighed six pounds. Such large stones are grasped by the bladder, so that the sound cannot pass it. Fifteen ounces is the weight of the largest stone that has been removed by operation. Here is one in the kidney weighing 54 ounces. I have said that a stone may remain in the kidney for an indefinite length of time. When that is the case the patient complains of vague pains in the region of the loins. He will suffer from increased frequency of micturition. His urine may be tinged with blood, evenly disseminated through the entire quantity. These will be all the symptoms, which are confessedly obscure, unless the stone pass out of the kidney into the ureter. In that case there will be intense pain in the loins from distension of the ureter, extending around the belly and into the testicle. Vomiting is also sometimes present. These symptoms may last from a few hours to several days, and then suddenly pass away. If you are called to such a patient and have relieved him by hypodermic injections of morphine, with which you ought to combine 1-100 of a grain of atropine, you must carefully inspect the urine for sev-

eral days to see if the renal calculus has been passed per urethram. If it should stop in the ureter and there stay and your patient have another attack, and that on the other side, suppression of urine might take place. Roberts, of Manchester, has seen a number of cases of this sort. In such cases the specific gravity of the urine goes down to 1.002, 1.003 or 1.004. When there is pressure on the kidney, but little urine filters through and there is a diminution of the urea. How can such a condition of things be appreciated other than by these symptoms? You may explore the ureter through the rectum, and if the stone could be felt at one of its usual stopping-places, just at the bladder, it might be squeezed through the ureter into the bladder. If that condition did not exist, I do not think I should hesitate to make an incision into the loin and if the calculus were found at its other favorite place of arrest, within four inches of the kidney, to extract it and run the risk of making a urinary fistula and so perhaps save life. Something is to be said regarding the preventive treatment of renal calculi. It may arise, as I have stated, from an increased quantity of salts in the urine. Sedentary habits or indigestion may increase the amount of salts in the urine. These conditions are to be corrected. In certain regions of the country more cases of stone seem to arise than in others—notably the limestone regions, but in this case I do not think that it is the amount of lime taken into the system (which is very small) that occasions stone, but the fact that the lime salts interfere with digestion and so set up, through impaired retrograde metamorphoses, this condition before shaken off, namely a urine too heavily laden with salts.

After cholera epidemics it has been noticed that there will come an epidemic of stone in the bladder. In that case there is a thickened condition of the blood, the loss of the watery constituents being the result of the diarrhoea. In that way the circulation is laden with concentrated material and gives rise to this same excess of salts in the urine. Such a condition is also found in people addicted to the use of malt liquors and in the gouty diathesis. You will make such patients take plenty of exercise. Let them keep their skin in good condition so that too much labor may not fall to the kidneys. Can we do anything

else? I think we can. Tell such a patient to avoid concentration of urine. At night time it is most concentrated and it remains in the tubules longest. You know that when you wish a specimen of urine for examination you always order the urine which has been passed first in the morning to be brought to you. That is because it is most concentrated. Your patient then should take a tumbler of water on going to bed, so that the urine in the tubules may be washed into the bladder, even if he has to get up to urinate towards morning. For medication, you may order the citrate of potash to be given, in doses of from forty to sixty grains three times a day. This can be taken for a long time without deranging the digestion. The Richfield Springs water in this country and the Carlsbad in Europe is very useful in maintaining a neutral condition of the urine. They owe their alkalinity to the sulphate of soda and potassa which they contain. They render the urine alkaline by virtue of these salts and do away with the clogged action of the liver, which is often the starting point of a calculus. By means of alkalies and purgatives we may hope to rid the patient of his troubles. The citrate of potash should be used fresh, as when kept it deteriorates. Natural mineral waters are preferable to the artificial. Sir Henry Thompson of London says that the natural waters do their work better than the artificial, although he cannot explain why. In the absence of the natural water the salts which are obtained from the natural waters by evaporation may be used. A teaspoonful of Carlsbad salts may be added to a tumbler of water and drank before breakfast in the morning. If taken warm, its purgative action is quickened. There are other useful mineral waters which you may rely on for treatment in these disorders. There is the Friedrichshall, which contains 58 per cent. of the sulphate of soda, and the Marienbad. But there is a water which is much more effective than any of these—the Hunyadi Janos. It is more pleasant to take than the bitter water of Friedrichshall and contains in 10,000 parts, 225 grains of the sulphate of soda and 223 grains sulphate of magnesia. It is fully twice the strength of any of the others. If your patient cannot buy the waters he can use Glauber's salts, which act nearly in the same way. Let him dissolve a teaspoonful of the salts in a tumbler of water.

Let it stand over night and drink in the morning. Increase the quantity if this does not act, for otherwise gas will accumulate in the stomach and bowels and cause distension, colicky pains and unpleasant rumblings. I have spoken of the citrate of potash before and told you that, as kept in the shops, it is often inert. Perhaps the best way to administer it is to make it extemporaneously by the reaction of citric acid and the bicarbonate of potash. This mixture may be taken while effervescent.

So, when you can, let the patient take the natural mineral waters, for they are the best, but if they are beyond his means, you will have to fall back on these preparations, and they will do you good service.

ANTISEPTICS IN OPHTHALMIC SURGERY.—Galezowski (*Recueil d'Ophthalmologie*, November, 1879) recommends antiseptic precautions for most operations on the eye, principally, however, in enucleation, operations on the lids, etc., and cataract extraction. All the instruments used, as well as the sutures and sponges, should be dipped in a solution of carbolic acid, 1 to 1000(!), and the wound, as well as the skin round about, washed with the same solution. More concentrated solutions may be used in the case of enucleation, and the compresses must also be carbolized, etc. Galezowski also uses other antiseptic applications, such as boracic acid and vaseline, 1 to 100, in abscess of the cornea, also a 1 per cent, solution of boracic acid for the purification of instruments to be used in cataract operations. Galezowski has had most excellent results since he has begun his antiseptics. It is difficult to see how failures could occur at all with such precautions(!) This subject was also discussed at the Amsterdam Congress, where it was introduced by Snellen, who uses a one per cent. solution of carbolic acid. He finds a spray impracticable, and has used instead, with great success, a current of air purified by being caused to pass through carbolic acid. As a dressing he uses linen saturated with vaseline, as he finds that the usual antiseptic dressings are too irritating, and causes an increased secretion from the conjunctiva and palpebral glands.

Original Communications.

ARTICLE II.

SELECT TOPICS OF MODERN SURGERY, Illustrated by Cases from Hospital Service and Private Practice. By Drs. E. W. LEE and CH. FENGER, of Chicago.

TUBERCULOSIS OF JOINTS, WITH THREE CASES OF EXCISION.

Tuberculosis of the knee-joint. Excision by Dr. Ch. Fenger.

The discussion of the subject of exsections of the knee-joint which follows, is abridged from a clinical lecture delivered in Cook county hospital, where the operation was made.

Exsection of the knee-joint is generally considered a serious, not to say dangerous, operation. We shall now first consider this point; then its indications in general and in this case; and finally the methods of operating which this case is intended to illustrate.

For the danger to the life of the patient we must seek information in the statistics.

A series gathered by König (*Beiträge zur Resectionen des Kniegelenkes. Langenbeck's Archiv.* ix B. p. 177, and *Holmer Hospitalstidende Optegnelser af praktisk Lægekonst*, 23 October, 1872) is as follows :

<i>Surgeon.</i>	<i>Good Result.</i>	<i>Failure.</i>	<i>Mortality.</i>
Hodges	44 per cent.....	56 per cent.....	33 per cent.
Holmes	62 " 38 "	28 "	
Heyfelder (children and adults)	60 " 39 "	30 "	
Heyfelder (adults).....	44 " 56 "	39 "	
Price.....	56 " 43 "	27 "	
König (children).....	62 " 37 "	19 "	

These statistics were gathered about 1870, and show a mortality of about 30 per cent. This is the death rate of the statistics of Pénières (*Des resections de genoux Paris, 1869*), who found in 431 cases of excision of knee-joint for white swelling, 131 deaths, that is 30 per cent.

From English surgeons, however, we have smaller series of operations, with far better results.

Fergusson reports in an old series.....	31 cases with 11 deaths.
In a later series	20 " " 5 "
Humphrey reports	39 " " 6 "
Jones reports	19 " " 2 "

In considering the value of the statistics there are two interesting facts.

1. The age of the patient has great influence on the death rate, as shown by Pénières :

Age.	Death Rate.
From 0 to 5 years	38.8 per cent.
" 5 to 10 "	15 " "
" 10 to 15 "	18.9 "
" 15 to 20 "	32.7 "
" 20 to 25 "	35.7 "
" 25 to 30 "	37 " "
" 30 to 40 "	45 "

In one series of Pénières were 30 excisions in children from nine to eleven years without a death. The death rate is lowest therefore in children from five to about 20, and the danger as the age advances gradually increases.

2. The period in which the operation was performed is next in importance, insomuch that we find the death rate from the early days of this operation by surgeons to a recent date to be steadily decreasing. Pénières gives the following statistics on this point:

From 1762 to 1830 there were 11 excisions, 6 deaths. Per cent., 54.5.	
" 1838 to 1850 " 21 " 11 " " 52.3.	
" 1850 to 1860 " 246 " 73 " " 27.	
" 1860 to 1869 " 155 " 42 " " 27.	

Better methods of operating, better after-treatment and better knowledge of the indications for the operation may account for this decrease in death-rate. But even in 1873 the average death rate was not below 27 per cent. Exceptions were Fergusson's

second series, 25 per cent.; Humphrey's series, 15 per cent.; and Jones' series, 10.6 per cent.

In Germany up to this time (in 1873) the death rate is considered by Volkmann to be about 50 per cent. (*Sammlung Klinischer Vorträge, R. Volkmann, Die Resectionen der Gelenke, 1873*). Very naturally, therefore, Volkmann preferred the expectant treatment in white swellings of the knee-joints in the absence of fever and wasting discharges that threaten the life of the patient.

The next and latest important step toward a more favorable result for this operation is Lister's method of operating and dressing.

In 1872 Holmer of Copenhagen made four excisions for white swelling, with three good results, one secondary amputation and no deaths.

In 1875, '76, '77 Volkmann made thirty-two excisions for the disease with no deaths from the operation. One patient died several weeks later of tubercular meningitis.

It is now impossible to know the exact danger to life from this operation. We cannot expect to reduce the death rate to zero by antiseptic methods, for that would be perfection. We can only hope to come nearer and nearer the ideals without ever reaching them. But the latest statistics from other fields of operative surgery give us the right to expect that excision of the knee-joint will henceforward be an operation devoid of very great danger whenever all its details and after-treatment are performed with strict antiseptic precautions. But the surgeon must have patience to attend to all the little details of the antiseptic method, on each of which the life of a patient may depend.

The object of excision of the knee-joint is obvious. It is to save a limb that otherwise must be lost sooner or later by amputation, this latter operation being finally required in cases where recovery is hopeless by abatement of the inflammation or by such firm ankylosis in a false position as will not give the patient a useful limb.

By this operation we create a firm ankylosis which the patient can use continuously without pain or fatigue.

The question now is, can we accomplish this purpose of the operation without months of confinement and suffering in bed for

the patient, with such abundant suppuration as would endanger his life from exhaustion, amyloid degeneration of the kidneys, liver and spleen, even if he should escape pyæmia?

From Hedges' statistics, Gant puts the average time of after-treatment at eight months. This is a long time if the patient must remain in bed and sustain a constant suppuration.

Fortunately this is not the case. As soon as a solid osseous union has taken place between the cut ends of the femur and tibia we may allow the patient to be about on crutches. Ferguson has had patients up in this way in three to six weeks after the operation; but such cases are regarded as fortunate exceptions. Holmer had his patients up and on crutches after three or four months.

Under the Lister dressing suppuration is sometimes reduced to a mere trifle, generally to a moderate amount; so there is no danger from exhaustion.

If then, the patient can expect to be up after an average of three months and be sure of a useful limb after other three or six months, he is far better off than he could be without the operation.

The history of this case is as follows:

James C., æt. 15 years, clerk (in chair factory), entered Cook County Hospital July 15, 1879. None of his relations have suffered from consumption or cancer. Had measles and typhoid fever in childhood; always healthy since. Two years ago he received a kick from a playfellow upon his left knee. Pain disappeared in a few days and there was no swelling. Three or four months later the knee-joint began slowly to swell and be occasionally painful; and motion became gradually impaired. The joint felt to him stiff. The knee remained in this condition about six months, during which time he could walk, run and jump without much pain. Then one day, when jumping, he suddenly felt severe pain in the joint and he was obliged to sit down two hours. The pain gradually subsided and soon he was able to run about again for a short time. But gradually the swelling increased, pain came on and he got easily tired.

About a year ago abscesses formed and opened on the outer and inner sides of the joint near the hamstring tendons. Fistulæ

were left which discharged six months; they closed to break open later again and again close up. No spiculae of bone were discharged to his knowledge.

Contracture now came on and the leg was at last flexed at nearly a right angle and motion was limited to twenty degrees. In spite of this condition he could, most of the time, hobble about, bearing some weight on the leg; but the leg easily tired, and on stepping upon an uneven surface or jarring the knee, pain was produced. He is constantly afraid to have any one come near the limb for fear of hurting it.

On July 3d (12 days ago), while at work, a sudden pain came on and the knee got worse. Now any considerable motion causes pain. In perfect quiet pain is absent. As to previous treatment he says at one time a doctor tried to aspirate the joint, getting no fluid. Another time a blister was applied over the joint with the effect of ameliorating the condition.

He is now slender, pale and lean. The heart, lungs and abdominal organs are healthy. The urine has no sugar or albumen. The left knee is enlarged forming a prominent round tumor. The joint is flexed to about 110 degrees and motion is allowed of only 10 degrees; attempts to increase the range of this causes pain.

The relative position of the crus to the thigh at the joint is that of genu varum, knock-knee. This means a partial dislocation due to weakening or partial destruction of the internal lateral ligaments. On the sides of the joint are depressed reddish spots, the seats of the closed sinuses. The patella is immovably fixed to the fossa of the condyles of the femur. The swollen soft tissues form a uniform softish somewhat elastic mass, like India rubber of medium hardness. There is no fluctuation or other evidence of fluid in the capsule or outside the joint. Pressure upon the mass does not cause pain except at two points on the sides corresponding to the spaces between the joint surfaces covered by the lateral ligaments.

We have here a chronic fungous arthritis, or white swelling.

The constituents of the joint are already partially destroyed as proves the adherent patella and weakened internal ligaments and the partial ankylosis, i.e. the impaired motion.

We have now to ask what would be the result of this case without operation.

The destructive inflammation here has been slowly progressing; motion has grown less and less, partly from tenderness and pain, partly from false position. We have for the three weeks he has been in the hospital tried gradual extension (by weight and pulleys) to correct the flexion, and hot fomentations for the pain. The treatment has not had the slightest effect. We then have left the choice between forcible extension of the joint under anaesthesia, and immobilization with plaster of Paris, or starch, and excision.

The liability of the inflammation at the bottom of the old sinuses to be lighted up anew speaks against immobilizing bandages. They would have to be removed at intervals. This would make recovery by ankylosis in good position unlikely to occur. This treatment would probably be interrupted by abscesses that might extend up and down between the muscles and make amputation necessary, and excision, if it was to be made, much more uncertain of a good result.

The age of the patient is in favor of excision, and a solid union of the bones with diseased soft parts removed is decidedly preferable to a more or less complete ankylosis with diseased tissues remaining between and around the epiphysis of the bones, because in this case there would always be a liability to a relapse of the inflammation.

Excision being then decided on, the next question is the plan of operating.

1. Esmarch's bandage for operating without bloodshed should be used when there is no danger of pressing pus or infectious thrombi of the veins, up into the healthy soft parts above the seat of operation. As there are no abscesses and no oedema we shall use it here. Besides avoiding blood loss, this method enables us to distinguish the character of tissues with much more exactitude than we could without it. It is not only consistency but color that indicates what tissues are to be removed, and what not. The well-known light yellowish gray color of cheesy matter means fatty degeneration of the tissue—that it is dead or dying and must be removed.

2. The incision that gives the easiest access to all the different parts of the joint is the semilunar cut commencing at the tuberosity of one of the condyles of the femur, a right handed

operator will commence it at the internal condyle of the right knee and the external of the left, coming down toward the tuberosity of the tibia and returning to the other condyle. It divides the inferior patellar ligament and subjacent adipose tissue. These parts lifted up give an easy access to the joint.

3. After division of the lateral and cruciate ligaments a forcible flexion of the joint will show us the condition of the joint and enable us to bring the epiphyses to turn out so that the diseased part may be sawed off. For this purpose we use Butchers' saw and cut the femur from the joint backward.

As to the line of the cut, if this is parallel to the line uniting the lowest points of the two condyles, we will remove too much of the external condyle and get after coaptation a position of knock-knee. If we cut in a line perpendicular to the longitudinal axis of the femur we remove too much of the internal condyle and the opposite deformity is the result i.e., bow-legs. Linhard advises to cut just between the two lines described. Of the epiphysis of the tibia we remove a disk, cutting from the posterior surface anteriorly and parallel to the articular surface.

As to the thickness of the disks to be removed, we should remove all the bone diseased but not a particle more. We should endeavor furthermore to have two even surfaces of equal size of bone that perfect union by first intention may if possible take place.

In children the epiphyseal line has a certain importance for the future growth in length of the bones of the limb. If possible we should spare the whole or a part of the epiphyseal cartilage. Anatomical investigations by Giraldez place the limits beyond which we are not to go as follows: In the condyles of the femur, 2 cm., in the intercondyloid fossa, 1.5 cm., in the tibia 1.5 cm. Still more exact details are given by König (*Langenbecks Archiv.* i. x.). The epiphyseal line is situated in a child of 11 as follows (from the articular surfaces,) internal condyle of femur 2.4 cm.; external condyle 2.1 cm.; anterior portion of intercondyloid fossa 1.6 cm.; posterior part 1.4 cm.; anterior part tibia, (near tuberosity) 3.8 cm.; posterior part 1.5 cm.; medium inner part 1.5 cm.; external lateral half 1.4 cm.; Each additional year adds one millimeter to the depth of the epiphyseal cartilage. In the present case we shall cut off 2 cm. of the femur and $\frac{1}{2}$ to 1 cm. of

the tibia, and then if the surfaces are healthy unite them; if local diseased foci are present scoop them out with the gouge rather than remove a larger portion of the epiphyseal cartilage. Should the whole epiphysis, clear to the medullary cavity be diseased we may have to amputate.

The patella, if diseased, is to be removed. If not, shall it be left? From Pénieres statistics we learn that saving the patella raises the death rate 30 per cent. and more than doubles the chances for the necessity of a secondary amputation. Hodges calculates that the removal of the patella shortens the after-treatment 30 days. Holmer makes the sensible remark that the patella, if left in its place, makes the internal cavity of the wound irregular, thus making pockets for fluids that should be discharged and besides presents possible starting points for new caries. Therefore we shall remove the patella in this case.

4. Excision of the thickened capsule is the next step. The whitish, firm or grayish elastic tissue into which the soft parts of the diseased joint are transformed, must be removed. Authors differ as to the advisability of this step. The majority advise the removal of what conveniently can be, and say that particles of indurated tissue left will do no harm but will be absorbed or will participate in the formation of the cicatrix. The minority advise the removal of every particle of the fungous capsule, even the posterior wall to the coats of the popliteal vessels. One author, Prof. Albert of Innsbruck* advises the extreme step that we secure the popliteal artery and vein by a loop before dissecting away the adjacent capsular tissue, that no accident to these vessels may necessitate amputation. We shall, in this case, remove as much as possible of the thickened capsular tissue without resorting to the ligation referred to.

5. We next shall drill a hole through the bones on each side and pass in a soft silver wire of 0.5 to 1 millimeters diameter.

6. After loosening the elastic constriction of the arteries above the knee we shall stop haemorrhage by ligatures with catgut of possible bleeding vessels, elevate the field of operation and wash it out with $2\frac{1}{2}$ to 5 per cent. solution of carbolic acid.

7. A drainage tube will be placed between the posterior wall of the capsule and the posterior aspect of the cut osseous surfaces, i.e. the tube is carried along the whole of the posterior line of the united cut surfaces of the epiphyses.

8. We then unite the silver wire sutures so as to procure a uniform and perfect contact of the cut osseous surfaces.

9. The limb is then to be placed in a padded white metal splint, with movable doors at each side of the joint to admit of free application of the antiseptic dressings.

It is a Petits splint modified a little as shown in

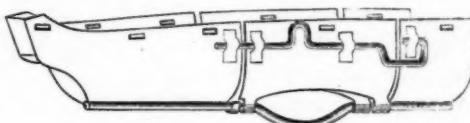


FIG. 1.

The strings from the upper margin of the splint allow of the suspension of the whole limb. The pads consist of carbolized cotton covered by protective or carbolized oil silk.

This mode of bandaging procures immobilization and gives easy access to the wound, without disturbing it, for dressing.

The fenestrated plaster bandages are good for fixing the limb, but do not permit of renewing antiseptic dressing without soiling the bandage.

A plaster dressing cannot be kept clean enough to avoid danger of septic infection of the wound.

Having placed the limb in the padded splint and brought the osseous surfaces in perfect contact we insert another drainage tube along the anterior margin of the osseous union and unite the wound.

First we unite the divided inferior patellar ligament. Next we unite the wound with cat-gut or carbolized silk, leaving only openings for the silver wire and drainage tubes. The ends of the latter we may fasten to the skin by a stitch of silk suture and then cut them off short and obliquely, so as so facilitate the introduction of the point of a syringe for aspirating fluids and washing out with antiseptic solution if necessary.

The operation was made with the aid of Drs. Isham, Lee and

Jacobson of the Hospital staff, and Drs. Sawyer, Clausen and Murphy of the house staff.

The mode of operation was as already indicated. There was no purulent fluid in the joint. The capsule was firm, whitish and 3 to 5 millimeters thick, and thickest in the region of the lateral ligaments. The whitish tissue here contained irregular sinuous cavities filled with thick yellow cheesy matter. The cartilaginous surfaces of tibia and condyles of the femur were superficially destroyed, with irregular nodular surfaces in which islands of denuded carious bone were surrounded by fibrous adhesions between the tibia and condyles of the femur. The adhesions were broken by forced flexion. The patella was united with partial ankylosis to the intercondyloid fossa of femur. It was separated by chisel and hammer. The supra patellar bursa was obliterated. It was dissected loose to permit the anterior flap being held away from the condyles. A disc 2 centimeters thick was sawn from the condyles of the femur, leaving healthy cancellated structure.

The tibia was separated at its upper posterior margin from its periosteum, leaving this in connection with the posterior wall of the capsule, and a disk $1\frac{1}{2}$ centimeters thick was removed. In the external half of this cut surface was an island of firm cartilaginous tissue of the epiphyseal cartilage; the cancellous surface was healthy.

On bringing the cut surfaces together the leg was straight, as in the highest degree of extension. As we desire ankylosis in a slight degree of flexion, another and wedge shaped piece was cut from the tibia, when the position was perfect. The patella was removed subperiostially by the gouge. The whitish firm tissue of the capsule was dissected and extirpated. The holes were drilled in the sides of the bones and the silver wires inserted. After removal of the elastic compression one small artery was ligated with catgut, all further bleeding was controlled by the carbolized solution. The posterior drainage tube was inserted and on a suggestion of Dr. Isham was brought out through an opening cut posterior to the hamstring tendons. The bones were brought together and the silver wires twisted; the leg placed in the splint, the anterior drainage tube inserted; the patellar ligament united; the external wound closed with carbolized silk; the

drainage tubes stitched to the skin; the leg lifted out of the splint and a perfect Lister dressing applied; the leg replaced and the knee surrounded with oakum and fixed by a woollen bandage around the splint. The patient was put to bed and the limb suspended to a wooden frame upon the bed at its lower half.



5. Incision of abscess on external side of knee.

4. Out of bed on crutches.

3. Incision of small abscess.

2. Solid osseous union. Silver wires removed.

1. Cystitis from the use of a not disinfected catheter.

Microscopical examination of the thickened capsule, hardened in chromic acid solution, revealed miliary tubercles throughout. (See paper in Chicago Medical Journal and Examiner, May, 1880, fig. 4.)

Diagnosis:
Miliary tuberculous arthritis of the knee-joint.
Sinuses with cheesy matter in each side of the thickened capsule, superficial tuberculous destruction—caries—of the articular

surfaces of the bones. Ankylosis of the patella, progressive ankylosis and contraction of the joint. Destruction of the internal lateral ligaments and knock-knee.

The after-treatment showed the following courses :

August 6.—Some pain in knee and heel. Cotton placed between tendo Achillis and splint to relieve heel, pain ceased. Ice bag to knee. Morphia hypodermically.

August 7.—Slept two hours last night. No pain. Retention of urine. Catheter. Urine is normal.

August 8.—Catheter twice. Ammoniacal odor of urine, alkaline reaction and some pus and blood by microscope. Dressed the knee. No swelling or redness. Drainage tubes full of clots of blood. Removed by passing soft carbolized bougie through them. Fluid injected comes through, slightly bloody but without pus. (This fluid is equal parts of two and one-half per cent. solution carbolic acid and water that has been boiled.) Dressing nearly painless. To take camphor and opium pills and infusion of triticum repens.

August 9. Slept all night, Passed urine with pain at end of act. Had beef tea and toast.

August 10.—Dressed knee. Hardly any discharge from tubes. Urinary troubles continue. Washed out bladder with solution of boracic acid.

August 11.—Some pain in knee. Urine alkaline.

August 14.—Passed urine three times yesterday. Slept well. Little pain. Appetite fair. Dressed the knee.

August 18.—Dressing renewed again. No pain.

August 20.—Dressed. Upper drainage tube removed.

August 26.—Dressed. By moving limb, some union appears to have taken place between the bone surfaces.

August 28.—Pulse 96, temperature 103 $\frac{1}{2}$. No pain; feels well in spite of the fever.

August 29.—Dressed. *Solid osseus union*. Silver wires removed.

August 31.—A small abscess has formed by side of medial end of upper drainage tube. Incision and discharge of half a teaspoonful of thin slimy pus.

September 5, a. m.—Pulse 112, temperature 104° F. Sen-

sation of cold followed by heat this morning. Thirst. Pain in left side, and dyspnoea. Pain is in region of ninth to twelfth ribs; pressure here painful. Physical examination gives no signs of inflammation of lung or spleen. Bowels not moved for forty-eight hours. Poultice to region of spleen. Quinine and wine and an enema.

September 6, a. m.—Pulse 120, temperature 102° F. Pain less. Anorexia. Obstinate vomiting. Carbolic acid, one drop, every two hours. Champagne and ice. P. m.—Pulse 92, temperature 102.5° F. Vomiting stopped. Pain less.

September 7—Pulse 74, temperature 99.5° F. Slept well. Vomited only once. Pain nearly gone. Bowels moved twice yesterday. Feels well except uneasiness in abdomen.

September 8.—No pain or vomiting.

September 12.—*Out of bed on crutches, and with high sole on shoe of sound foot.*

September 15.—A fluctuating swelling on external side knee, round outer side hamstring tendons. Incision and escape of one ounce viscid yellow pus.

September 27.—In and about this abscess and adjoining part of the scar is found soft, bluish-red nodules of granulation tissue surrounding small sinuses that continue to discharge a little slimy purulent fluid, they show no tendency to healing. Patient anaesthetized and sinuses scraped out with sharp spoon, also the wall of the abscess—all under the spray.

October 1.—Wound healing. Patient looks a little pale. Ordered cod liver oil and syrup of iodide of iron.

October 9.—On the inner side of the knee where the drainage tubes and silver wire found exit, are some bluish-red oedematous excrescences of tuberculous granulations secreting a slimy fluid. These are cauterized with nitrate of silver.

October 13.—*Patient walking about all day. Can walk without crutches or cane.* The wound from the scraping out on outer side of the knee, all closed up.

October 17.—The granulations on inner side knee show no signs of healing in spite of repeated cauterizations. Patient anaesthetized and the tuberculous granulations removed by gouge and sharp spoon. A sinus was found leading along up and above

the scar of the primary wound 3 centimeters. Wall of the sinus scraped out and drainage tube inserted.

October 25.—Opened small abscess at middle of original semilunar incision.

November 1.—The small wound healing rapidly.

November 3.—Opened another small abscess (size of hazelnut) in the interior part of scar. Patient walks about all day without pain.

In January 1880 a similar small abscess formed in the anterior part of the scar.

In February 1880 patient left hospital and began work as cutter in glove factory, being able to be about constantly.

In April a small superficial abscess again formed on the outer side of the knee. It was opened and healed in 8 days.

The present condition is as follows.

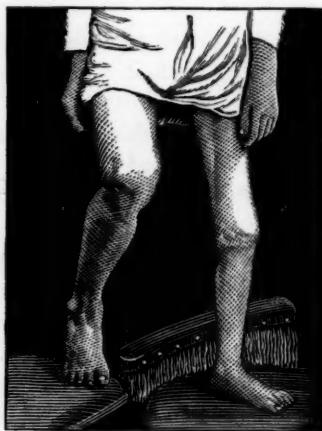


FIG. 2.

Solid ankylosis in slightly flexed position. The transverse scar irregular from abscesses, ulcers and their removal. Shortening of the extremity $1\frac{1}{2}$ to 2 inches; from the anterior superior spine of the ilium to the external malleolus, $1\frac{1}{2}$ inches and to the internal malleolus, 2 inches shorter than opposite limb. Perfectly useful limb; can stand on it all day without pain. No trace of tuberculosis apparent in other organs of the body.

A speedy osseous union is the most important point. This

secured and a final success is almost certain. In our case this occurred in the third week and was complete in twenty-four days. It occurred as rapidly as in uncomplicated fractures frequently. It was a perfect instance of healing by first intention and may be considered rare in its rapidity.

But it is obvious that if we can convert an excised knee-joint into a subcutaneous fracture by antiseptic methods scrupulously carried out and immobilization, we may make a rule of what has been the exception. It might be objected that such rapid healing would not occur in advanced years as in youth, as it is known that the danger of open fractures increases with the age. But Volk-mann has shown by one hundred cases of compound comminuted fractures treated antiseptically that such recover as well and rapidly as simple fractures, and regardless of the age of patient. Formerly 20 to 30 per cent. of such cases were lost by suppuration and pyæmia, now none of them provided they are treated antiseptically from the first. In excisions of the knee-joint we have the right to expect as good results under the Lister treatment as in these fractures, even better, as the wounds in the excisions are not for one moment out of the antiseptic atmosphere.

As to danger to the general health from confinement in bed, our patient was out of bed on the 38th day. Twice this length of time would do no injury.

The only accidental complication in the after-treatment was the cystitis, and that was probably due to the use of an undisinfected catheter to draw the urine during the early retention, that is so common after an operation.

There was very little fever early, and some of this may have been due to the cystitis. It was not till after the bony union that some sudden rises in temperature occurred. These were due to the formation of the small acute abscesses. The tuberculous character of the fungous arthritis in our case was the cause of the only troublesome disturbance during the after-treatment, namely, the formation of abscesses, and these were neither dangerous nor serious. The primary incision healed by first intention entirely and nowhere reopened. But about this scar the little abscesses of the size of a hazelnut already described, formed with slimy, clear fluid and slimy, viscid pus. This process is due to excessive for-

mation of miliary tubercles in oedematous adenoid tissue, thus breaking down in fatty degeneration, making small tuberculous vomicæ, and leaving tuberculous ulcers with little or no tendency to heal. This process is unaccompanied by fever or much local pain. Sometimes about such tuberculous foci are formed small abscesses in the connective tissue.

One such formed in this case along the inner hamstrings and opened on the 31st Aug. Another, on the outer side, opened Sep. 15. Such abscesses cause slight fever as occurred here. They may close up speedily and entirely, or partially and leave a small tuberculous cavity. This, as well as the bluish swollen tuberculous, ulcerated or broken down nodules, resist all local treatment. The only effective treatment is entire removal. The wound will heal rapidly and with a permanent scar.

The cause of these secondary multiple but local eruptions of miliary tubercles is obvious. Particles of the thickened fibrous capsule of the joint with their miliary tubercles have been left here and there, and now form starting points for other tubercles in soft, young adenomatous tissue. A careful removal of all the capsule is the only way to prevent these little troubles in the after-treatment. This tendency of tubercles to grow in the scar should be a warning to us to remove all traces of such formation from the bone if deeper local foci are found here.

We are inclined to believe that those who hold the removal of all the capsule to be unnecessary have gathered their experience from cases of white swelling or chronic inflammation of the knee-joint with few or no deposits of miliary tubercle.

*Tuberculosis of Elbow-joint. Excision by Dr. E. W. Lee,
Chicago.*

SYNOPSIS.—*Primary osteo-tuberculosis of the head of the radius. Secondary tuberculous fungous arthritis tending to ankylosis. No abscesses or sinuses. Subperiosteal excision. Recovery with joint movable and useful. Almost complete reformation of the removed osseous parts with formation of new joint.*

Mary C. B., aged 8 years. Had whooping cough at four, scarlet fever at seven, and measles a few months later. Recovery

perfect. No tuberculous history. She is one of nine children; all the rest healthy and none of them ever had scrofulous disease.

At one year of age she fell down stairs—only five or six steps. Three months later her mother noticed she kept the right elbow flexed at an angle of 45 degrees; it was somewhat stiff but not swollen. The arm remained in this condition six years. No pain was experienced and no attempt was made to move the joint. Dr. Lee first saw the child when she was seven years old. Then the joint was stiff, the member was carried in a drooping manner as though it was a useless appendage. There was considerable atrophy of the muscles of the whole limb, but most of the extensors of the forearm. No active motion was possible of the elbow joint; neither flexion and extension nor pronation and supination of the forearm. By forced and very painful passive motion the forearm could be flexed 10 degrees.

The child was anaesthetized and forcible movement of the joint in all directions made, to break up adhesions. The arm was then placed in a flexible splint with rubber bands. Passive motion was now made daily and the child was induced to lift sand-bag weights. In three months she had motion of 25 to 30 degrees. Soon thereafter the joint became swollen and tender and passive motion had to be discontinued. The joint soon became as stiff as at first.

Passive motion was resumed on two occasions later but without benefit. Each attempt was followed by pain and swelling.

Subperiosteal excision was made January 27, 1880, at the patient's home, by Dr. Lee, assisted by Drs. Fenger and Bridge. The patient was etherized and Esmarch's bandage applied. Then, under the spray, a longitudinal incision eight centimeters long was made on the posterior side of the joint, dividing the tendon of the triceps longitudinally. The periosteum was detached by a strong gouge, thus preserving the attachment of the extensor tendons to the periosteal sac of the olecranon.

In the same way the head of the radius and the cubital epiphysis of the humerus were enucleated, leaving their periosteal covering in connection with the overlying soft tissues. In the cavity of the joint were a few drops of slimy, grayish pus. The articular cartilages were destroyed and the bones presented partly

rough denuded surfaces, partly a soft, reddish-gray covering consisting of fungous granulations.

The olecranon was removed entire, also the head of the radius. Of the lower end of the humerus two centimeters in length was sawed off. The cut surfaces of bone were healthy; one small artery only was ligatured and that with catgut. A drainage tube was inserted the whole length of the wound, which was closed with silk sutures. The Lister dressing was applied and the arm fixed to an angular splint. Examination of the excised bone showed that the head of the radius had lost its cartilaginous covering on the articulating surfaces and presented several small cavities or excavations two to three millimeters deep and the same in diameter. The walls and base of these cavities consisted of white, hard and smooth osseous tissue with no fungous granulations on the surface. The shape of the cavities indicated that probably here a primary osteo-tuberculosis had developed, at first in the spongy portion of the bone. These tuberculous foci had enlarged and finally reached the articular surface, opened into the cavity of the joint and caused the fungous tuberculous arthritis. The osteo-tuberculosis in the head of the radius has come to an end, the cheesy matter and the lining membrane of adenoid tissue and miliary tubercles have disappeared and left a clean cavity with no further tendency to destruction of its walls.

The articular epiphysis of the humerus presented a different stage or form of the disease. Here we find the secondary, superficial, diffuse osteo-tuberculosis or tuberculous caries destroying the bone from the surface. The cartilages were all gone and the articular extremity of the bone was altered in shape and reduced in size. In some places rough, bony surfaces were present, in others irregular layers of reddish-gray fungous granulations covering the bone. The tissue was so friable as to be easily removed from the bone, which presented then a roughened surface. The microscope showed these granulations to be adenoid tissue containing spiculae of bone undergoing absorption and miliary tubercles. The articular surface of the olecranon showed the same morbid conditions as the humerus.

The after-treatment was fortunate. No suppuration occurred. The wound healed by first intention. Drainage tubes were re-

moved in two weeks. Dressings were renewed every two or three days. In three weeks the wound was entirely healed.

After four days, passive motion was commenced with the screw of the splint. After 10 days, passive motion was made at each dressing, the splint being removed.

After four weeks the splint was dispensed with and active motion commenced. Later, to force the child to use the arm, the well arm was tied to the waist and kept beneath the clothing.

She now has a very useful arm with new formed joint—as the members may see by examining the patient. There is 90 degrees of motion without pain, i. e. flexion and extension. She uses the arm for everything, and the whole day long without pain or fatigue.

There is shortening of the whole extremity by about three centimeters—two of which are due to shortening of the humerus.

In examining the new formed joint we easily feel a large new formed olecranon and condyles of the humerus, the external the largest.

Pronation and supination are permitted to about half the normal extent, viz., to 80 and 90 degrees. There is a slightly lessened volume of muscle of the whole extremity, amounting for the arm to three-quarters of an inch in circumference, and for the forearm to one-half inch.

The favorable course and result of the case, absence of fever and suppuration may be due to the antiseptic methods used. The splendid result as to mobility of joint is due of course to the subperiosteal method of operating.

We need hardly say that the older methods with destruction of periosteum are never to be employed where mobility of joint is expected afterward.

Will the good result as to motion of this joint be lasting?

For elbow and shoulder joints we know the results may be good several months after the operation, and later all active motion be lost either from ankylosis due to relapse of the fungous arthritis, or by relaxation of the tendons and ligaments of the new formed joint, the latter producing what may be termed a loose joint.

We hope to show this patient to the society again a year hence when the permanent result of the case may have been reached.

Tuberculosis of Hip-joint. Excision by Dr. E. W. Lee, of Chicago.

Before relating the history of this case we wish to say that we are unable to exhibit the patient as she is still under treatment.

The case is communicated to illustrate some improvements in bandaging and dressing the patient after this operation, and because the tuberculous character of the disease in this case has brought out a measure of importance in the after-treatment.

SYNOPSIS.—*Tuberculous fungous arthritis, caries, morbus coxarius of right hip-joint of three years standing. Large anterior abscess. Excision subperiosteal by external longitudinal incision; the abscess emptied and scraped out from the incision. Drainage through two openings. Three months later the inclosed abscess again laid open by a large incision and its entire wall of tuberculous tissue scraped out, the abscess closing entirely in eight days thereafter. The leg dressed in Sawyer's modification of Hodgen's splint. The dressings re-applied as often as required by means of Lee's frame for the dressing of excisions of the hip-joint.*

Sarah Jane B., aged $9\frac{1}{2}$ years. No consumption, cancer or hip disease in family. The father's parents both living. Mother's father died in her infancy of some disease unknown; her mother living. The patient is one of a family of ten children, of which five are living and healthy; one died of cramps, one of teething, one of diphtheria and one was still-born. No scrofula or skin disease has occurred to any of the family. She had whooping cough and varicella at five years of age and measles at seven.

The hip disease began Feb. 1877. Eight months previously she had slipped down a short flight of stairs (3 or 4) but complained of no pain afterward, and was not lame for six months. Then symptoms began. She was taken to Dr. Gunn who recognized the hip disease and put her under treatment in St. Luke's Hospital and afterward at home. The treatment was by splints and extension by weight and pully and was continued two months.

She improved, could walk and run and jump without appearance of lameness.

In the winter of 1878-9 she fell from a chair upon her back upon the floor. She appeared only slightly hurt but rapidly grew lame. Six months later she was so bad she was obliged to use

crutches. Early in December 1879, the mother noticed a hard swelling anterior to the diseased joint. She consulted Dr. Lee who pronounced it an abscess originating from a carious hip-joint and advised excision.

Operation by Dr. Lee was performed December 24, '79 with the assistance of Drs. Fenger, Isham, Clarke, Bridge and McLennan. At the time of operation the child was poorly nourished, and had hectic. The thoracic and abdominal organs were normal. The right lower limb was shortened $1\frac{1}{2}$ inches, adducted and flexed. Active movements of the hip-joint were impossible on account of pain. Under the influence of ether, limited motion was possible, but no distinct crepitus was produced. A large fluctuating abscess was felt reaching from the anterior superior spine of the ilium down to the upper third of the femur anteriorly.

Under the carbolic spray a longitudinal incision was made from a point five centimeters above, down along the outside of the trochanter major five cms. The periosteum was detached from the bone, the capsule opened and the head dislocated from the acetabulum. As the head of the bone was atrophied from superficial caries and the neck presented a tuberculous cavity (as described in a previous paper where it is shown that the cavity reached down to the lesser trochanter), the upper extremity of the femur was removed just below the lesser trochanter. The cut surface of the femur was here healthy. The acetabulum presented several roughened surfaces, partly covered with tuberculous granulations. These were gouged out until firm osseous substance was met with. The anterior abscess was opened through the wound and its wall scraped off and the membrane removed in pieces. A counter opening was then made at the lower extremity of the abscess and a drainage tube inserted through its whole length and fastened with sutures.

The acetabulum was washed out with a $2\frac{1}{2}$ per cent. solution of carbolic acid, and two drainage tubes inserted and fixed to the respective ends of the incision with sutures when the wound was closed with silk sutures.

A perfect Lister dressing was applied, over which was placed a layer of carbolized oakum, and the patient was placed into Sawyer's splint.

This new and splendid apparatus for dressing excised hip-joints, combining extension and suspension of the operated extremity, was first applied in the summer of 1879 in Cook County Hospital, Chicago, on a patient operated upon by Dr. Fenger.

We here present drawings of the instrument and the written description of the apparatus, prepared by Dr. Sawyer himself.

The splint was a modification, or rather an extension of the well known Hodgens' anterior splint, employed in fractures of the femur, etc. The outlining framework was constructed of five-eighths inch iron, while the cross-bars arching over the limb and body, as hereafter described, were of three-eighths inch iron.

The five-eighths iron bar constituting the main framework of the splint, commenced at the lower border of the axillary space on the side of the affected limb and was extended downwards to a point six inches below the foot, being moulded so as to correspond, with approximate accuracy, to the outline of the body. Below the foot the bar made a square turn, extending horizontally inward about four inches; thence turning squarely again and running up the inner aspect of the affected limb to the groin. From this point it arched across the opposite groin in an oblique direction corresponding with the inguinal fold and at the anterior superior spinous process of the opposite ilium, took another and final turn, ascending along the opposite side of the body to its termination at the lower border of the axillary space. Arching across the limb and body, and connecting the two branches or "legs" of this framework, were five cross pieces at the following points: first, at the upper extremity of the splint; second, extending obliquely from a point six inches below the upper extremity on the affected side to the angle of the splint corresponding to the anterior superior spinous process of the opposite side; third, at a point corresponding to the inner and lower extremity of the fixed arch across the opposite groin; fourth, at the lower third of the thigh; and fifth, at the lower third of the leg. Of these arches all but the third terminated on either side in a hook for the purpose of suspending the apparatus. There was a slight bend in the splint corresponding to the knee-joint, so as to allow of limited flexion, and another at the upper end of the femur, where it was bent upward at an angle of perhaps 20° .

This apparatus was applied after the manner of a Hodgens splint. Adhesive straps were applied to the limb as high up as the lower third of the thigh, being secured to the limb by a roller. These straps were attached at their lower extremities to a "stirrup block," which was in turn fixed to the lower end of the splint by means of a short piece of elastic tubing.

The limb and body were supported by broad strips of muslin passing underneath and secured by pins on either side to the framework of the splint.

The apparatus was suspended by two sets of cords as follows : 1. Four being converged from the four lower hooks already mentioned to a point some distance above the limb, were attached to a line dropped from a pulley in the ceiling a little below the foot of the bed, the degree of obliquity in the direction of this line varying with the amount of extension desired. 2. Four cords converging from the four upper hooks to a point a few inches above the body, were attached to a line dropped directly downward from the ceiling, a set of compound pulleys intervening for convenience in elevating the body. For convenience in dressing the limb, a block was removed from the mattress corresponding to the location of the wound. This could be replaced when not dressing.

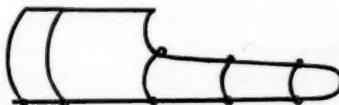


FIG. 3 shows the iron frame of Sawyer's splint.

Dr. Sawyer's splint proved in this first case—a boy of seventeen years of age—a most excellent and convenient help in the after-treatment. When the dressing was renewed the patient hoisted himself with the upper system of pulleys, an assistant raising the limb by the lower set of pulleys, the straps covering the wound were removed after drawing the block in the mattress and the wound easily gotten at.

An important point in the after-treatment, if we would carry out all the details of the antiseptic method, is this : We must be in no hurry, but must have ample time to cleanse every part of the wound, wash out the tubes, etc., without fear of tiring the

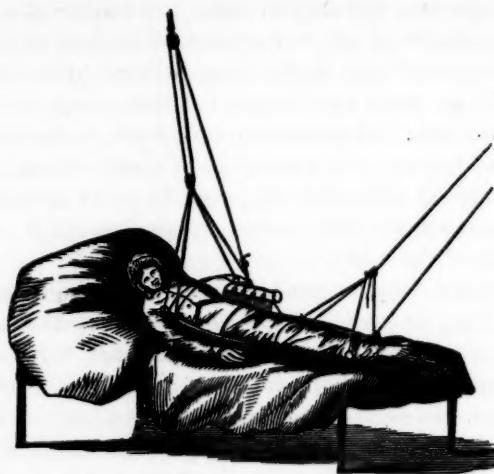


FIG. 4 shows the splint applied on the excised hip.

patient or causing him to get nervous or suffer pain. Therefore it is necessary to have the whole body of the patient easily suspended and high enough to enable the surgeon to get free access

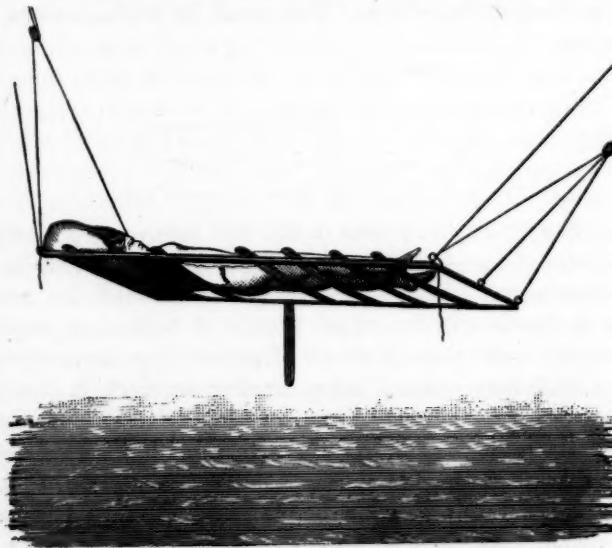


FIG. 5.

to the wound from below, to operate the atomizer and to change the bed clothes. To accomplish this, Dr. Lee devised a movable suspension frame with straps, to support the patient during the shifting of the dressing.

Fig. 5 shows Lee's frame for dressing of excisions of hip-joint. It consists of a wooden frame six feet long, two and a half feet wide, with cross straps four inches wide and four inches apart. Each corner has a strong iron hook for attaching a suspension rope.

The center of each of the end pieces bears another hook for fixing the end of the rope after the apparatus is hoisted.

The mode of operating is as follows: The patient is first hoisted in Sawyer's splint five to ten inches above the bed. Lee's frame is placed on the bed beneath, when the patient is lowered upon it. The ropes are then adjusted to the frame and this is raised up two feet, bearing patient, Sawyer's splint and all, and fixed in this position. The patient has a pillow under his head and is perfectly comfortable.

The bed is then taken away. The straps in Sawyer's splint covering the Lister dressing are unbuttoned and removed. Next the straps in Lee's frame covering the wound are removed. The antiseptic dressing is then accessible, is easily removed and the wound cleansed, under the spray. The bed is refreshed and the new antiseptic dressing in all its layers is prepared and laid upon the bed in the proper place, when the bed is brought under the patient and he is let down upon the dressing, the application of which is completed by bringing around the body the ends of the many-tailed bandage that holds the dressing firmly to the part.

The straps of the splint are readjusted and the patient hoisted by this away from the wood frame which is now removed, and the patient is again lowered on the bed and the dressing is finished.

The description of this dressing and the apparatus may make it appear complicated and unpractical. But if you could see the dressing made upon these little patients and see them, as we often have seen them, laugh, chatter and make fun during the whole of the tedious performance, which otherwise must be tiresome and painful, you would not entertain such an opinion of it.

The splints and dressing hitherto in use for the after-treatment of excisions of the hip-joint can none of them be used when a perfect Lister dressing is to be made, without the greatest inconvenience. The plaster of Paris bandages of the Germans, although they may be combined with both extension and suspension are not strong enough when sufficiently large fenestræ are cut for changing the dressings and they cannot be kept clean and their renewal is attended with great inconvenience and discomfort to the patient. The best apparatus hitherto used is, in our opinion, Sayre's wire apparatus or splints. (Sayre's Orthopedic Surgery and Diseases of Joints, N. Y., 1879.) This combines immobilization and extension. It does not permit as free access to the wound for the application of the Lister dressing as our own apparatus, neither can it be kept as clean; furthermore it is much more expensive.

Volkmann, in a valuable monograph in 1873 (Die Resectionen der Gelenke, Sammlung Klinischer Vorträge, N. 51, 1873, p. 306), made the following remarks: "I do not deny that the invention of a, so to speak, mobile, immovable apparatus for dressing excised hip-joints, whereby cleansing the wound, defecation, etc., can be accomplished without moving the patient, would be a great advantage."

The apparatus already described,

1. Permits defecation, dressing the wound, changing the bed clothes, etc., without moving the patient; it lifts the patient without moving him.
2. It can easily be kept perfectly clean.
3. It is inexpensive.

We regard it as a step toward the accomplishment of the desideratum of Volkmann.

COURSE OF THE AFTER-TREATMENT.

December 25, Pulse 140 temperature $102\frac{1}{5}$ Fahrenheit.

"	26,	"	136	"	$102\frac{2}{5}$
"	27,	"	138	"	103
"	28,	"	130	"	$102\frac{3}{5}$
"	29,			"	101
"	30,			"	101

December 31, Temperature 101.

January 1, Temperature 101.

January 3, Temperature 103.

January 4.—On making the dressing the inferior opening into the abscess is completely plugged by a mass of tissue. On pulling it out it was found to be as large as a hen's egg and consisted of tuberculo-adenoid tissue of the membrane lining the abscess.

January 5.—The temperature had fallen to 102.

Thereafter the temperature steadily fell, and the case progressed favorably.

In 2½ months the hip had become so firm that the child could be moved in any way without pain. The Sawyer's splint was then dispensed with and ordinary extension by weight and pulleys substituted.

Three weeks later the child had an attack of facial erysipelas—the patient lived in a deep basement, and something of an epidemic of erysipelas was then going on. Only the head, neck and shoulders were involved, and the attack lasted two weeks.

The erysypelas had no effect on the wound. During its course however the precaution was taken to dress the case oftener,—viz., every two instead of every four days.

After convalescence from the erysipelas was established, the granulation tissue in the lower opening of the abscess broke down and the discharge increased in quantity and continued in spite of antiseptic precautions. As the granulation tissue of the now almost closed excision wound showed symptoms of breaking down, it was deemed advisable to extirpate the walls of the abscess.

This operation was made March 30 under anaesthesia. The abscess was freely laid open and was found to communicate by a sinus with the excision wound. This sinus extended to a denuded osseous surface above the upper posterior border of the acetabulum on the iliac bone. The upper end of the femur and the acetabulum were united and surrounded by a firm connective tissue mass in which no sinuses or traces of inflammation could be found.

The abscess was lined with a grayish soft, friable but adherent membrane, one to three millimeters in thickness, with smooth surface and without visible miliary tubercles. This mass was entirely scraped off down to healthy fibrous and muscular tissue. The

denuded osseous surface was also scraped out. The haemorrhage was insignificant. Two drainage tubes were inserted, one along the whole length of the abscess, the other reaching to the denuded bone and being brought out through the old excision opening. Microscopical examination showed the excised membrane to consist of adenoid tissue and thousands of miliary tubercles.

On April 1st the Lister dressing was reapplied and no pus flowed from the abscess.

April 3.—Some pus came out the upper posterior drainage tube. In one week the tube was removed from the abscess, and in three days the sinus left by the tube had closed.

Two days later the second tube was removed and now a little sinus is left leading to the denuded bone.

The second point to which we wish to call special attention in the treatment of this case is the careful removal of the tuberculous lining of the abscess.

As Volkmann has advised, these abscesses should be laid open throughout their whole length. If in our case this had been done at the first operation probably its repetition would not have been called for. We feared at first to make this thorough operation on account of the large external wound it required, and so our first scraping out was not effectual.

As experience has shown that the external wound independently of its size, as well as the wall of the abscess, closes by first intention when the tuberculous matter is all removed and the operation is done antisceptically, we need not fear to make free and large incisions.

Such an operation as this is the only means we have of closing tuberculous abscesses and of saving our patients from the dangers incident to exhausting suppuration and in time amyloid degeneration of kidneys, spleen and liver, and from general tuberculous infection.

ARTICLE III.

HYSTERIA. By J. A. GOLDSBERRY, M. D. Read before the Parke County, Ind., Medical Society.

Hysteria is a malady whose origin doubtless antedates by many hundred years, the first case of which history or science furnishes any record; indeed I believe it to be coeval with the human race, and therefore if I would seek for the individual in whom hysterical phenomena first had a beginning, I would go back to "the mother of all living," to the person of Eve herself; for I doubt not that in that memorable period in her history when "she heard the voice of the Lord God walking in the garden," standing in His immediate presence she made that sad confession,—"the serpent beguiled me and I did eat," and this acknowledgment immediately followed by the Divine anathema, "I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children, and thy desire shall be to thy husband, and he shall rule over thee." While these events were transpiring, or, it may be, very soon thereafter, I repeat, I doubt not, amid circumstances, which, to her, must have been thrillingly exciting—that Eve's emotional nature was profoundly impressed, so much so, that for aught we know, for the first time in her life, she betrayed one of the weaknesses of her sex, and exhibited in her own case, perhaps in a striking manner, many of the symptoms characteristic of the disease under consideration. Is the hypothesis unreasonable? if so, why? She had been guilty of a grievous sin, for which she had incurred the Divine displeasure: not only so, but because of her act of disobedience she had entailed upon herself and all who were to come after her, the consequences of that sin, which were disease and death: a fact of which she had full knowledge. She now possessed, to their fullest extent, all of the frailties of weak human nature: she was subject to disease and the aches and pains connected therewith, both physical and mental, and was already, doubtless, in bitter grief, remorse and humiliation, reaping the fruit of her own sowing. Indeed it is difficult to conceive of circumstances, which, in their nature, were better calculated to develop the

manifestations peculiar to this affection, than those surrounding this Bible character at the particular time of which we speak. The necessary factors were all present. I am forced, therefore, to the conclusion that our maternal first-parent may have been the victim of hysteria. But lest I be considered a little speculative I will address myself to a consideration of the disease of more recent date—of to day, and with your indulgence, endeavor to adduce a few thoughts relating to this singular ailment. Hysteria is a disease peculiar to females. Why this should be so, is a problem, which, I think, will not admit of very clear solution. The doctrine of some of the early fathers in medicine regarding this affection was crude and ludicrous. They located the disorder in the uterus, and attributed many of the morbid phenomena to the "wanderings" of that organ from one part of the body to another. The muscular movements, in whatever parts these might be, the *globus hystericus*, were all due to the immediate presence of the womb. Another belief was, I think a much more rational one, that the disease originated in the brain itself. Hence we read of "cerebral hysteria," as we do also of "uterine hysteria." Since the days of Hippocrates, hysteria has been a constant source of vexation, and not a little mortification to the medical world; not because of its danger and fatality, for unfortunately, if you will pardon the expression, for many of those who are its victims, it never destroys life; I repeat that it is not because of its danger to life that the profession fear an encounter with it—that the medical man approaches a case of the disease with so much reluctance—but by reason of the generally acknowledged fact, that science with all of her many grand and brilliant achievements in the field of medicine, tells us, as yet, but little of the nature and pathology of this very common affection. That hysteria is a species of the neuroses; that it is primarily a disease of the cerebro-spinal center; that somewhere within that wonderfully complex system, the germ is to be found from which spring the varying and varied manifestations which characterize the disorder, is a conclusion, I think, to which we must all come at last. In a disease whose occurrence is so frequent, and with whose symptoms the gentlemen before me are doubtless more conversant than myself, it would seem unnecessary that I consume your time in dwell-

ing upon its clinical history, but as a paper of this character could not be considered complete without making some reference to that division of the subject, with your permission I will speak briefly in a rather general way, of some of the more prominent symptoms, after which I will submit a report of two or three cases which came under my personal knowledge and management; will also in conclusion make brief mention of the pathology, etiology and treatment of the disease. In this, as in all other ills to which flesh is heir, the morbid manifestations vary greatly in different individuals, and in no other ailment, perhaps, more so than in the one in question. The abnormal disturbances in one case may present scarcely a single feature in common with those of another. Not unfrequently the only observable symptom of illness is a loss of voice, coming on suddenly, and lasting, it may be, for months, the power to speak, without any apparent cause, returning as suddenly as it was lost and the case is well.

Again, there is exaggerated emotional disturbance affecting mental action in various ways; the patient may be laboring under a simple depression of spirits, or she may have a violent fit of weeping, or she may cry and laugh alternately. In another case the morbid manifestations are violent in the extreme, the patient screams at the top of her voice, sheds tears profusely, becomes very voluble when she is suddenly seized with convulsive movements, which may be local or general. In another class of cases the only departure from the normal state consists in some impairment of motility, which differs greatly in different cases, as to its completeness, character, and extent. In one we may have paralysis in the form of paraplegia, in another hemiplegia; or the part affected may be one or both hands, or even a single finger. There may be paralysis of some particular group of muscles, or what is more singular, a single muscle. We have recorded examples of the latter in the levator palpebrae superioris, and in one of the recti of the eye ball.

The laryngeal muscles are sometimes involved, or oesophageal, giving rise, when in the former, to loss of voice or aphonia, which may be complete or incomplete, when in the latter, difficult and imperfect deglutition. Or the paralysis may be, apparently, general, affecting every voluntary muscle in the body. Again, there

may be muscular spasms, involving, as in paralysis, a single muscle, or a particular set of muscles. The spasms are more frequently clonic in their character, but may be tonic, and when the latter, may last an indefinite period. The functions of the internal organs are always more or less impaired, thoracic and abdominal, but more uniformly the latter; the disturbances may be of the character of gastralgia or enteralgia, indigestion or obstinate constipation; pain of a neuralgic character in the uterus, ovaries, or bladder. When in the latter situation, the disorder is likely to be rebellious to all methods of treatment and exceedingly protracted, as I can testify from personal knowledge obtained from a long siege of perplexing experience in the management of a case thus affected. In still another class of cases the disease is characterized by deranged sensibility. This may be greatly exaggerated, constituting *hyperæsthesia*, or there may be a loss of sensation, resulting in complete *anæsthesia*. The different organs or parts of the body which may be involved in this morbid condition, of course, vary with different individuals. In one we may have hyperæsthesia of the integument, local or otherwise; in another it is confined to the muscles, and when the latter, more frequently those of the abdominal and thoracic regions than elsewhere.

Headache is a very common trouble, and among all the aches and pains and the almost innumerable morbid manifestations which characterize hysteria, no single one of them, I have thought, was more uniformly and constantly present than this one. Some one or more of the joints may be affected, simulating articular rheumatism. The internal organs are all more or less likewise involved; indeed, there does not seem to be any part of the body, internal or external, which is exempt from the impress of this particular form of hysteria. Loss of sensibility, or *anæsthesia*, though not so frequent in occurrence as the condition just alluded to, is, in a case now and then, a prominent symptom. While any part of the body may become *anæsthetic*, the skin is usually the seat of the disorder. A distinguished writer* on nervous pathology says: "In the days of witchcraft many an hysteri-

* Wm. A. Hammond.

cal woman, with anaesthetic spots on her skin, went to the gallows or the stake on suspicion of being leagued with the devil. The belief was that whenever the hand of the arch fiend or his assistants touched the skin, the spot at once lost its sensibility." It is not expected that in any given case of hysteria there must be present any great number of the almost innumerable list of symptoms which belong to the disorder. On the contrary, there are individuals laboring under the disease who present no other morbid manifestation, perhaps, than an obstinate headache or paroxysmal gastralgia, or cutaneous hyperesthesia, or anaesthesia, it may be a tonic spasm, with contraction of a finger; yet these cases are none the less hysterical than are those in whom the symptoms are numerous, well marked, and highly characteristic. In both the former and latter all of the morbid phenomena depend upon the same primary cause, all have a common origin, and all possess a common nature. Following is the clinical history of three cases, the first of which, for obvious reasons, I give somewhat at length. I was called on the morning of Aug. 9, 1874, to visit Miss D., whom I found, as she remarked, "feeling badly." She was a young lady of intelligence and culture, of sanguine temperament, rather full habit, and twenty years of age. She usually enjoyed fair health, but now and then, was subject to attacks of what seemed to be neuralgia of the stomach, for the relief of which I had frequently given her professional attention. She was lively and vivacious in disposition, with a nature in which the emotional element was largely predominant; was a professor of religion, and the purity of her life was questioned by none. She was the daughter of wealthy parents, her home was one of peace and plenty, and she was surrounded with everything, it would seem, calculated to make life comfortable and happy. On making inquiry as to what she meant by the expression "feeling badly," she replied that while she was not particularly sick and was comparatively free from pain, there was a terrible, indescribable sensation in the region of the stomach, of which she must be relieved without delay, otherwise she should certainly die. A careful examination of the case lead me to believe that my patient's conclusions as to her real condition were not well founded. Save a slight indigestion, with constipated

bowels, there was, apparently, no cause for what she insisted was a serious attack of illness; certainly there was nothing in her physical condition calculated to excite, in my own mind, the least anxiety. There was, however, a morbid mental state, evinced by gloomy forebodings and a marked depression of spirits. On the second day I found her very much the same; she had not slept well through the night; was rather less dejected, however, was more talkative and would occasionally smile; still complained very much at the epigastrium.

From a cathartic given on the first day her bowels had been freely moved; would take her meals regularly but had no relish for food. On the morning of the third day the true nature of the disorder was more fully defined; there was now, from the slightest pressure, apparently, great pain in the epigastric region. She complained of a feeling of fullness or choking sensation in the throat, the mammary glands were highly sensitive, as was also the integument covering the face. The muscles of the eyelids were more or less convulsed. She was at times very talkative; would weep and shed tears profusely one moment, as one laboring under some deep mental anguish, and the next she would break forth in hearty laughter. She had no inclination to sit up even for a single moment. She was sensitive to any sudden noise, and seemed to desire the seclusion of a darkened room. On the evening of the same day I was called in great haste, found the family in the utmost confusion and alarm. A little while before, the patient, while engaged in quiet conversation with the mother, was suddenly seized with a violent convulsion.

When I reached her bed-side she was in the midst of a second paroxysm. The whole body was in a frightful state of agitation, and, contrary to the rule in such cases, the muscles of not only the trunk and extremities, but those of the face also, seemed to be involved in the convulsive movements. Her body was jerked and thrown in many different shapes, flouncing from one side of the bed to the other, sometimes assuming a position which was amusing if not ludicrous. An attempt to restrain her would apparently intensify the violence of the paroxysm; if a hand was being held she would free it if possible and immediately afterwards, would not infrequently, seize hold of her hair and pull

with such force and persistency as to almost completely double the body. Occasionally there would be movements not unlike those observed in chorea. One leg would be drawn up with great rapidity and force, and again quickly extended, followed immediately by a like movement in the other leg. Spasm of the pharyngeal muscles was a very prominent, and, to the patient, certainly a very distressing symptom. She would frequently grasp the throat with one or both hands as if there was something there that was choking her to death, and would frequently not release her hold until the spasm had relaxed, when her hands would drop and she would utter a low, plaintive peculiar wail which was anything but pleasant to the ears of the bystanders. There was hyperesthesia, apparently, over the entire body; the slightest touch of the surface, accidental or otherwise, was immediately followed by a sharp cry or sudden movement of the body, indicating a degree of exaggerated sensibility very unusual. The eyes, while exhibiting the phenomena so common in this affection, were more profoundly affected than in any case I had ever witnessed; the entire orbital group of muscles of either side seemed greatly agitated, so much so that the eyeballs were in constant and rapid movement, dancing and jumping about in a very strange and excited manner, to which, when added the clonic spasms of the eyelids, with incessant nictitation or winking, together with more or less contortion of the facial muscles and a rather demoralized condition of her toilette, and there was presented in the physiognomy of this otherwise sensitive and refined female a not very agreeable or pleasing aspect. Strangely enough, during all of this violent perturbation there was very little disturbance of the circulation, the pulse maintaining throughout very nearly its normal character, a fact however which obtains in many similar cases of this disease. While volition was seriously impaired, it was by no means altogether lost, as there were unmistakable evidences of partial consciousness. This fact was plainly observed during the paroxysm, as two or three times while in the height of the spasm, she would have fallen from the bed had she not, to avoid the mishap, voluntarily changed the position of the body, a circumstance showing that the muscular movements were not wholly automatic. The par-

oxysm lasted half an hour or more, and the patient signalized the closing finale by a copious discharge of urine which pretty thoroughly saturated her own linen and the bedding as well. Soon afterwards she fell into a tranquil sleep which continued a couple of hours, when, on waking there were again strong convulsive symptoms, which were soon controlled by an anæsthetic.

During the greater part of the fourth day she was free from convulsive attacks, refused to take food or medicine, was easily excited, would now and then weep in a rather quiet way, was not inclined to talk and seemed exceedingly sad and dejected. Late in the evening of the same day she had two paroxysms ; these were not so protracted and were less severe than the one of the preceding evening, but as regards the morbid manifestations, did not differ materially. On the fifth day her condition was worse. She had not rested well through the night. In the morning she had two or three light paroxysms and the mental faculties were greatly excited. She would talk, laugh and cry, alternately, and made use of many expressions that were very foolish and absurd. She still refused to take medicine, and could not be prevailed on to taste food. She would occasionally drink a little water, but seemed to swallow with the utmost difficulty. On the sixth day she was no better ; while there were no convulsive seizures, mental action was greatly disordered. The faculty or power of perception seemed to be almost completely abolished. Her mind was therefore rich in illusions and hallucinations. Her mother's voice, in an adjoining room, she insisted was that of an individual whom she had never met but once. The familiar bark of a harmless old dog was mistaken for that of a wild animal that she had never seen or heard. Noise produced by the slamming or sudden closing of a door was taken for the report of a pistol, and many of the sounds in and about the house which salute the ears a dozen times a day she attributed to causes altogether foreign to those producing them. She would declare, with great vehemence, that there were persons standing before her who, at the time, were many miles away. Again, she would see a certain savage animal, the size, shape and color of which she described with singular accuracy. She heard sounds of many kinds and of almost every quality and character, when all about the house, save her-

self. was as silent as the grave. On the seventh day she was very much the same. She was still busy in looking at imaginary objects, in listening at imaginary sounds and in smelling imaginary odors. She was induced to take a little food, also a dose or two of medicine. On the eighth day she seemed better. Under the influence of chloral hydrate she slept during most of the night. She was calm and quiet, and the almost innumerable illusions, which for three days and nights had been holding high carnival with the mental forces, had all disappeared. She would take food when requested, but had no relish for it. She complained of headache, confined to the supra-orbital and frontal regions, also a slight gastric disturbance. Sensibility, cutaneous and muscular, appeared to be very nearly normal. She was not inclined to converse much, but when induced to talk she did so intelligently. While, as just observed, she was apparently better, there was an air of gloom and sadness in her general demeanor, which, I was fearful, might be the precursor of another outbreak, or if it were possible, some new development in the case. The sequel proved that my suspicions were well founded. On the morning of the ninth day I received a very pressing summons to visit my patient without delay. On repairing to the house I found, sure enough that the drama presented a new character. Early in the morning, soon after a violent fit of weeping, she passed into a deep sleep, from which it had been impossible to arouse her. Up to this date, as strange as it may appear, the family, particularly the mother, seemed wholly in the dark as to the nature of her illness, and hence had experienced no little unnecessary alarm and anxiety. Her mother was at the bedside crying bitterly, in the belief that her daughter was dying with, as she termed it, "brain fever." On carefully examining the case, it at once became evident, to my mind at least, that I now had before me a genuine case of *hysterical coma*. I assured the mother in a very positive manner, that she was greatly mistaken in her conclusions; that her daughter was not dying and was not likely to die very soon; that the disease under which she was laboring was void of danger and that her ultimate recovery was a matter of almost absolute certainty. But she was incredible, continued disconsolate and expressed great surprise that I should

thus try to deceive her. The patient lay in the supine position with the legs extended, and so far as I could discover, there was not the least movement of any part of the body. To look at her, she appeared like one in a natural sleep. Her eyes and mouth were closed and the respirations were normal, except that they were remarkably quiet and easy. The pulse, though rather feeble, did not exceed 80 beats in the minute. A strong effort to arouse her, during which I resorted to various and many expedients, failed most utterly; the coma seemed genuine and complete, and after all, it was not surprising that the friends looked upon the new development as one of serious import. On the tenth day she was no better; in some respects she appeared worse. She was still sleeping profoundly, and had not moved her body, so far as noticed, for a period of thirty-six hours. Sensibility, both special and general, was apparently abolished. The integument was pricked and pinched, the vapor of ammonia was applied to the nostrils, loud and startling sounds were made near the ears, the eyelids were raised and the conjunctiva manipulated in such a way as would ordinarily have caused the severest pain, but amid all of this torture she lay as one dead; there was not observed the movement of a muscle. The eyelids were constantly closed, and on separating them they would gradually resume their former position; the pupils were a little contracted, and responded slowly to a bright light. The pulse, temperature and respiration were normal. The mouth was easily opened, but there was no effort at deglutition, as fluids introduced into the mouth were allowed to remain or flow out. There was not the slightest rigidity of the cervical or dorsal muscles, nor of the extremities. Indeed, the voluntary system of muscles, as regards sensation and motility, was practically so much dead matter, whose connection with the cerebro-spinal center had ceased to exist. The abdomen was tympanitic, a condition which had not been observed before. The bowels were constipated and were moved with difficulty; nor had she urinated for forty-eight hours. As the bladder was very much distended, I decided to use the catheter, which was done without the least resistance on her part, and apparently without her knowledge.

This case had now been on my hands for a period of ten days

and such had been the anxiety and consequent importunity of her friends, that I was almost *forced* to spend a good part of my time at her bedside. The medical treatment thus far had been without any beneficial results : indeed her condition seemed less hopeful than at any time previous. While, it is true, the case has been, in many respects, an unusual one, at least as regards her persistent refusal to take almost everything that was offered her, dietetic and medicinal, thus seriously embarrassing all efforts in that direction, it occurred to me, for reasons which are entirely satisfactory to myself, that if she was cured in any reasonable length of time, the institution of a radical change in the method of treatment would become necessary. To this end, as an initiatory step, on the evening of this day I applied to the epigastrium a large blistering plaster. This procedure met with the ready concurrence of the family. As has been already observed, the patient had had occasional attacks of gastralgia, which, her mother thought, might be a factor for evil in the present attack of illness.

Before leaving the room, speaking so that all present might fully understand me, I stated most positively that my main object in blistering was to arouse the patient, that I would return early the following morning and if the desired result had not been secured, I should then blister the back of the neck, the temples and perhaps the whole length of the spinal column. I had entrusted to the confidence of a friend, a lady of intelligence and prudence, the programme decided upon, with my reasons therefor, and requested that she remain with the patient through the night, which she consented to do. I gave her full instructions as to the management of and the nature of the intelligence she should convey to the patient, should she awake before my return the next morning. About five o'clock the following morning, for the first time in forty-eight hours, she was noticed to move the body slightly ; this was directly followed by her drawing up one leg, then the other ; soon after which she rolled slowly over on the right side. Presently she opened her eyes, looked about the room, and, on being asked how she felt, replied that she was very tired. While she was inclined to be somewhat melancholy, she was evidently free from any mental aberration. She ate some with relish and soon expressed a desire for more. My

friend above alluded to, regarding this as a favorable opportunity, choosing a time when no one was present, delivered to the patient the message, the substance of which was that for more than a week she had been a source, to her parents, of a great deal of unnecessary trouble and alarm, from the belief on their part that she was seriously ill ; that her case was simply one of pure hysteria, and consequently, as she herself was aware, quite void of danger. That it was a disease, which, in a great measure, was under the control of the will. Her case was therefore virtually in her own hands ; if she chose to exercise a little self-control and will-power, her cure would be sure and speedy, otherwise she would lie there indefinitely. When she was informed that this information was given to her by my authority and request, she manifested great surprise that I should treat her in such a way, and declared that my action was not only ungentlemanly, but unpardonable ; presently she began crying and seemed much affected, insisting that I was bitterly cruel and unjust. In a few minutes she ceased her crying, became apparently indignant, rose up, called for her clothing, dressed herself and fairly sprang from the bed, remarking, if she was not sick there was no use in her lying there any longer. The following day she was out driving, *cured*. So much for a little moral therapeutics. So far as could be ascertained, the only cause of the attack in this young lady, the history of whose case I have imperfectly given, was disappointment in a love affair. She subsequently married, has since borne two or three children, and, I think, has had no return of the hysteria.

CASE II. This case was that of a married lady, aged 25 and the wife of a farmer. About four months subsequent to her first confinement she was taken, during the night, with an oppression, as she expressed it, in the region of the stomach ; this was soon followed by a feeling of fullness of the throat, characterized by more or less dyspnoea. I saw her the following morning in connection with my friend Dr. Ira Gillum. She complained of a sense of fullness at the epigastrium and upper bowels. There was evidently a highly flatulent condition of the stomach, evidenced by frequent gaseous eructations. She had pain in the top of the head, also in the supra-orbital region. There were no evidences

of any uterine trouble save a slight degree of retro-flexion. There were no convulsive attacks, nor had there been any, but there was some mental aberration, characterized mainly by the morbid interest she manifested in her own case and the many absurd reasons she gave for the development of this or that symptom. She claimed not to sleep well, and, when asleep, was annoyed with all kinds of unpleasant and frightful dreams. Her pulse was normal, appetite fair, bowels inclined to constipation. She remained very much in the condition above described, now a little better, then worse, for three months, when she suddenly became paraplegic. She attributed her inability to walk to prolapsus uteri. When informed that she was mistaken, that there was no prolapsus, she declared that the womb had escaped from the vagina and was plainly visible. No amount of persuasion could induce her to make the least attempt to walk unaided. The paralysis did not involve the sensory nerves nor was motion entirely lost, as, with help she would now and then walk a little, but in doing so her feet were scarcely lifted from the floor, her steps being made by a dragging or sliding movement. She would sit in a chair for hours, but would always have to be carried to it, and while sitting up would not unfrequently employ her time in reading, needle work, etc. Her appetite was good and she indulged it to the fullest extent, and save an irregularity of the bowels, due, doubtless, to a want of exercise, she was in excellent general health.

About four weeks subsequent to the attack of paraphlegia, she was suddenly seized with a desire to visit a neighbor's one-half mile distant. Her paralysis disappeared as if by magic, and she made the round trip unaided and with comparatively little fatigue to herself, but she had hardly reached her home when the paraplegia returned. Four more weeks elapsed, during all of which time, she refused to walk, insisting, when interrogated in regard to her condition, with apparent earnestness and candor, that the source of the whole trouble was the prolapsed uterus. Wearyed and vexed beyond endurance, I concluded that I would try the experiment of becoming a convert to the opinion of my patient as to the cause of her helpless condition. This was a happy thought and delighted her beyond measure. I assured her that

the difficulty could be relieved, and explained to her the method of treatment which would be necessary, to which she readily assented. This consisted in simply introducing into the vagina one of Hodge's lever pessaries. While, as already stated, there was no prolapsus in the case, nor had there been any, the use of the instrument had the desired effect. It righted the displaced organ and the restoration of motility followed as a natural consequence. The pessary had not been worn but a few days until she was able to walk with comparative ease. At least two months have elapsed since the paralysis was relieved, and while it cannot be said that she is not laboring, to some extent, under the hysterical condition, there has been no return of the troubles just referred to.

CASE III. This case was that of a young married woman, 26 years of age, of fine physical development, who had for years enjoyed uninterrupted good health. She was of a highly nervous temperament, and was irritable and obstinate in disposition. She was the second wife of her husband, who had a family of several children. With these, on one occasion, she became greatly exasperated, so much so that she was quite uncontrollable. Soon after this paroxysm of ill temper, she had a fit of crying, then she took to her bed, became quiet, and for three days scarcely spoke to any one. During this time she ate regularly, was conscious and did not complain. On the fourth day she closed her eyes, and claimed that it was impossible for her to open them. On the fifth day I was called to see her for the first time. She was lying on the bed, resting comfortably, was entirely free from pain, also from any undue excitement. She was rational and conversed quite freely; indeed her blindness, as she termed it, seemed to be the only feature in the case that was clearly abnormal. Having, as yet, received no information relating to the case, I was inclined at first to attribute the difficulty to a paralysis of the third pair of nerves, but as this was not likely to occur in the absence of symptoms pointing to cerebral lesion, and no such symptoms were observable—this fact, together with what I was able to learn of the circumstances immediately connected with the beginning of her ailment, led me to the conclusion that the case was one of hysteria. On raising the lids, which was easily done, the balls were found rolled upwards, so much so, that it was impossible to

get a view of the pupils. For ten days the condition of the patient remained very much the same. Her general health was good, but the local disorder continued. At length I concluded I would try the virtue of blisters about the head and neck. To this she entered an emphatic protest and requested that I wait another day. I returned the following morning and found her sitting up, *with eyes open*, which in appearance were quite normal. She was lively and cheerful, and expressed herself as feeling unusually well. Her household duties were at once resumed and so far as I know she has had no return of the malady.

As to the cause of hysteria, but little seems to be absolutely known, and in this regard, with this, as with many other disorders that afflict humanity, the profession is not altogether a unit. While some, distinguished in the field of pathology, look upon it as an idiopathic disease, having its origin in some or all of the nerve centers, and of course wholly independent of reflex influence; others, scarcely less eminent, are of the opinion that it is primarily a local disease, and that its seat may always be traced to the sexual organs. In other words, that hysteria is a "reflex nervous derangement due to sexual irritation."

It is said to be a disease peculiar to females, but that it sometimes occurs in the male, there is no doubt, as quite a number of well authenticated cases of the latter have been reported. Within a recent period a well-defined case of the disease in the male was under my own charge. The patient was a young man, who admitted that he had been for years addicted to masturbation, which, doubtless, in this case, was the chief factor in the production of the disease. There can be no question, however, that sex stands at the head of the list among the predisposing causes of hysteria. Among others may be mentioned age, heredity, and the civil condition as it relates to the married or single state. Of those who are attacked with it, the vast majority are between the ages of 15 and 25; and as to hereditary influence, if the physician will take the pains to inquire into the antecedents of cases of hysteria which may from time to time come under his care and observation, he will find that a large proportion of them "had either hysterical mothers, aunts, or grandmothers." The condition of celibacy unquestionably predisposes

to the disease. Why it should do so, is a question, in regard to which there are, of course, a variety of opinions.

Of exciting causes, their name is legion. Any circumstance or event, whatever may be its nature, which powerfully excites the emotions, whether the emotional disturbance be in the form of grief, fright, a fit of rage, great anxiety, or disappointment may bring on an attack. So also may causes or influences of a depressing character which tend to exhaust nerve force, whether from excessive bodily or mental exercise, or both. So also may the disease be induced as a result of reflex action consequent upon some local irritation. Nor do I think it necessary that in order that the disease be developed, the morbid local disturbance must be of a particular character, nor that it be located in any particular part of the body; it *may* be in the ovaries or uterus, it is *frequently* some where else. Why not? To claim that in every case of this malady the muscular movements and morbid manifestations have their focus in the reproductive system, would be doing violence, it seems to me, to the great law of reflex action. Why not the source of irritation be seated in some other part of the organism, as in bowels loaded with flatus or feculant matter? in a disordered stomach? a carious tooth or an inflamed eye? and so on *ad infinitum*. Again, how are we to reconcile the theory that insists that the cause of all hysterical symptoms is to be sought for in the sexual system, with the acknowledged fact that in many cases the most searching and rigid scrutiny utterly fails to detect in the sexual organs even the slightest derangement. In these cases how are we to escape the conclusion that the hysterical phenomena are due to a purely psychical cause? In other words, that the exciting cause is not peripheral, and therefore not uterine, but that it is primarily centric in its origin? Called to a case of this disease, it is improbable that any intelligent physician, with his wits well in hand, would be puzzled very long as to what the trouble is. There will be present in every case certain distinctive features which will generally enable him to arrive at a correct diagnosis with little difficulty. It should be remembered, however, that hysteria may be associated with other diseases, especially is this likely to be the case with individuals who possess the "hysterical diathesis."

A young medical friend of mine had under treatment, in the person of a young lady, a case of typhoid fever of mild type. For years she had been subject to hysterical attacks, which were almost certain to supervene on any physical ailment. At the very commencement of her illness hysterical symptoms developed themselves and soon became prominent. While the physician was resting easy and congratulating himself on the supposed fact that the case was one comparatively free from danger, his patient died. As to the prognosis in any given case of this disease, if we would be governed by its past history, we can always calculate with absolute certainty on a favorable result, or rather, I would say, that in no case of uncomplicated hysteria is there danger to life, for while many cases are cured, at least temporarily, there are many others that no method of treatment, medical or moral, can do anything for, but these latter never succumb to the disease. As regards the pathology of hysteria, the profession is groping its way in a labyrinth of doubt and uncertainty.

That it is a disease of the nervous system, characterized by exaggerated emotional disturbance, with impaired volition or will-power, is a proposition to which all, perhaps, will agree; but as to the primary seat of the disorder, whether its starting point is in the uterus, or whether it is to be found in the brain, spinal cord or ganglionic centers, is a question upon which there is a radical difference of opinion. The weight of authority, however, at present seems to favor the cerebral theory. In conclusion, a few words relating to the treatment of hysteria. This, to be at all successful, for obvious reasons, must necessarily embrace the medical, moral and hygienic. Of the many drugs which, from time to time, have been used in the treatment of the disease, it would probably be safe to say that nineteen-twentieths of them have proved worse than useless. There is perhaps no class of medicines more largely employed in this affection than the antispasmodics. It has fallen to my lot to treat many cases of hysteria; not a few of them representing every conceivable phase, grade and character of this wonderfully strange disorder; in common with many of my professional brethren, and in obedience to the teachings of many of our text books, I formerly depended,

in a measure, for the relief and cure of my patients, upon the use of the reputed remedies just referred to. I have tried honestly and faithfully, with my limited professional knowledge and meager ability, to watch and note their effects, and I trust I will be pardoned if I give it as my deliberate opinion that, as remedial agents in hysteria, they are comparatively valueless. I have over and over again, in the treatment of the disease employed many of the so-called nervous stimulants or anti-spasmodics; I have used them in large doses and in small ones, at short intervals and at long intervals, and for days and weeks in succession; I have given valerian, which has been regarded by Dr. Meigs and others as almost a specific in this affection; I have given it freely and persistently, in powder, solid and fluid extract; I have used lactucarium, assafœtida, hyoscyamus, musk, belladonna, valerianate of ammonia, sulph. ether, camphor, and I hardly know what else, and I cannot not now recall to mind a single instance in which the administration of any of these drugs, alone or in combination, was followed by any *marked* beneficial results. There *is* a medicine, however, which may almost *always* be relied upon. I refer to the bromide of potassium. For the purpose of calming and quieting the irritable condition of the nervous system, preventing convulsive seizures, exerting a favorable influence over the mental state and of *curing*, in many cases, the exaggerated sensibility, or hyperæsthesia, which not unfrequently exists, I know of nothing that will compare with it. I generally give it four or five times daily in from 20 to 30 grain (1-2 gm.) doses, and continue it, if necessary, for an indefinite period. To control the convulsions, which, to say the least of them, are always the source, to the physician, of no little annoyance, many rely on the use of cold water applied to the head after the method of the douche; this to my certain knowledge, in many cases, is highly efficacious. To succeed, however, it should be used copiously and freely, and persisted in until consciousness is fully restored and the patient begs for quarter. But if any doubts should be entertained in any given case, as to the propriety of applying the douche, chloroform or ether may be administered by inhalation. The cold douche may, and sometimes does, fail us, but I think I may safely say that either of these anaesthetics,

given for the control of hysterical paroxysms, can be depended upon in every case, with absolute certainty. For the relief of the paralysis, which in a certain proportion of cases, is a prominent feature, I have used with good effect, strychnia, in connection with phosphorus; conjoined with these, high authority recommends the employment of electricity, by the primary or induced currents, or both, as may be thought best. In the paroxysms of coma, which now and then resist, at least for the time being, all forms of treatment, the douche not unfrequently works wonders; some resort to the procedure known as "firing" with satisfactory results; others again depend upon blistering. An example of what this latter method of counter-irritation will sometimes accomplish, has already been referred to in another part of this paper. Of course it will be admitted that the good accomplished by these measures, that is, the employment of the cold douche, the anæsthetics, the counter-irritation, or the galvanic current, is mainly, if not altogether, due to their moral effect. With the view of destroying as nearly as may be what has been very properly termed the "hysterical condition," I have been using for a number of years, with encouraging results, phosphorus, combined with some one of the preparations of strychnia, I usually employ the formula, first recommended, I think, by Dr. William A. Hammond, viz: nux vomica grs. x, phosphide of zinc grs. iij. Mix and divide into 30 pills; one pill three times daily before meals. In giving the above prescription I have found it necessary, in some cases, to lessen the proportion of phosphide of zinc at least one-fourth in consequence of its tendency to gastric disturbances.

To succeed with it however, it will be found necessary in not a few cases, to continue its use, for weeks or months. To relieve indigestion and other forms of gastric derangement so common in this disease, I have found the comp. tinc. of gentian to act well in many cases; and as there is not unfrequently more or less vomiting, I am in the habit of combining with the gentian the dil. hydrocyanic acid. I give of this prescription two drachms three times every day, awhile before each meal. In addition to the above or as a substitute therefor, should there be acid eructations, attended with a flatulent condition of the stomach and

bowels, a very valuable remedy will be found in the sub. nit. or sub. carb. of bismuth, given in fifteen or twenty grain doses *after* meals. The hygienic management of the disease will, of course, very naturally address itself to the attention and good sense of every intelligent physician, hence I feel that anything I might be able to say in that connection would be not only unnecessary but superfluous.

But, gentlemen, in spite of our best directed efforts looking to the cure of this disease, regardless of any or all of the means which may be used, or methods adopted, a very large proportion of the cases remain uncured; and until science shall have advanced still further into the domain of medicine, revealing to us truths connected with its pathology and etiology of which we are at present ignorant, you will, I think, agree with me in the proposition that the medical treatment of hysteria must necessarily be, to a large extent, empirical.

ARTICLE IV.

CEREBRAL RHEUMATISM. By P. O'CONNELL, M.D.

Five and a half years ago (January, 1875), the *American Journal of the Medical Sciences* published an elaborate paper with the above title, from the pen of Professor Da Costa, of Philadelphia. Cerebral rheumatism must always possess deep interest for practitioners, especially if it may be now and then encountered in a quasi-epidemic form. In the following pages it is intended to make some comments upon this disease and upon the paper named above.

After a careful perusal of the paper, I dissent from the conclusions drawn by the distinguished writer from the study of the twelve cases given by him. To me it seems clear that these were not at all instances of "cerebral rheumatism," as I shall endeavor to show.

The dates in some parts of the notes of the cases related are indefinite and somewhat jumbled. It is not always easy, therefore, to say definitely when certain symptoms first appeared, nor

when changes in the treatment were made. The twelve cases embodied in Prof. Da Costa's paper, with the exception of Case IX, which was seen in consultation, and was an instance of chronic muscular rheumatism, were primarily cases of acute articular rheumatism, and, save Case IX, were all treated in the Pennsylvania Hospital. All received the same general, almost identical, treatment.

Dr. Da Costa limits "the term" (cerebral rheumatism) "to cases in which the nervous symptoms are prominent, and appear to constitute the real features of the affection."

"The disorder is not a frequent one, and has been chiefly commented upon in isolated cases. Whether from a distrust of results thus obtained, or from a real rarity of the affection, or whatever the cause, the medical journals and hospital reports may for years be searched in vain for any detailed records of it." *

"It has already been pointed out that uncomplicated rheumatism, however severe it may be, is rarely attended with cerebral disturbance." (Bristowe, First Ed., Pract. Med., page 820.)

That the disease is really rare, is well known. I find statistics of 5,783 cases of acute rheumatism reported by competent, able, fearless men, and no mention is made of any form of cerebral trouble. The reporters are men engaged in active, busy practice, both public and private, with an experience extending over twenty, thirty, and even forty years. Dr. Da Costa believes he has seen no less than twelve cases of this formidable malady in the short space of four years, and attributes this frequency with which the disease is met certain years over others to "some peculiarity of the rheumatic poison, which makes it fix more readily on the brain, as we sometimes see by way of exception the typhus fever poison attacking the intestine, or influenza producing a catarrh of the mucous membrane of the bowel, rather than of that of the respiratory tract." It is just possible, though probably not observed, that Dr. Da Costa has confounded several different and distinct diseases. Such is what, I believe, has happened, and what a perusal of the cases, as detailed in the *American Journal*, will show. I will give here the salient points

* The quotations are from Prof. Da Costa's paper, unless otherwise specified.

of each case; to give them *in extenso*, or even a full abstract of each case, would occupy too much valuable space.

CASE I. Was sick two weeks before admission to hospital on Dec. 26, 1871. Convalesced from the rheumatism. Then albuminuria with suppression of urine followed, and the patient died in a stupor January 9, 1872. The autopsy, in which the brain was not examined, proved the existence of the large, hard kidney—Bright's disease. Clearly death was due to uræmia.

CASE II. Was sick two weeks before admission on February 25, 1871. Urine contained one-sixth albumen, with granular and oily casts. Died March 13, 1871. The autopsy revealed the existence of the large, pale kidney. Lungs congested posteriorly, with a pint of clear fluid in each pleural cavity. No intra-cranial lesion.

CASE III. Was sick ten days before admission on April 23, 1872. No urinary reactions are given. Patient was of feeble mind before admission. Dyspepsia, cough and dullness of right lung posteriorly were noted, as well as some petechiae on abdomen. Urinated involuntarily in bed. Died April 29, 1872. No organic disease of the brain was found on *post mortem* examination. Meninges seemed congested, "brain firm, pale and anaemic." No other organ was examined.

CASE IV. Was sick four days before admission on Janusry 18, 1872. Was a highly hysterical female. Had cough and "mild, good-natured mental aberration." Defecated and urinated involuntarily in bed. Died March 2, 1872. No disease of brain found on post mortem examination. Other organs healthy.

CASE V. Was four days ill before admission on January 3, 1874. Heart grew very feeble; had oppression in chest, rapid breathing, and "quiet and good-natured," but nearly constant delirium. There were "fine râles and faint friction at lower part of right lung; both lungs were congested." Recovered.

CASE VI. Was ill a week before admission on May 9, 1873. A puny, impoverished subject. Urine albuminous. Died in a stupor June 17, 1873. The brain was not permitted to be examined. The other organs were fairly healthy except the pericardium, which was adherent throughout.

CASE VII. Was ill five weeks before admission on December

23, 1873. There were sonorous râles in posterior chest. Had active delirium one night. Died January 14, 1874. In the autopsy the brain was found anaemic; some hypostatic congestion of the lungs. Other organs healthy.

CASE VIII. Was sick twelve days before admission on March 4, 1872. Was hysterical and had headache, flushed face, prolonged and sobbing respiration at times. Urine not examined during life; some drawn from the bladder by catheter after death was highly albuminous. Micturition occurred involuntarily in bed. Died March 21, 1872 in an unconscious condition, the temperature just before death being 108.2°. No autopsy was permitted.

CASE IX. Chronic muscular rheumatism; seen by Dr. Da Costa in consultation. The notes were lost and the case is quoted from memory. There is insanity in the family; patient became insane, but ultimately recovered her health. Embolism was supposed to be the cause of the particular head trouble (insanity) noticed.

CASE X. Was sick eight days before admission on March 9, 1872. Face was noted pale and puffy, with large red spots on it. A typhoid condition developed. Delirium. Died comatose May 4, 1872. Post mortem: the brain alone was examined and only grossly, when nothing abnormal was seen.

CASE XI. Had "no cerebral symptoms," but the extraordinarily high temperature of 110°. Recovered.

CASE XII. Was ill a week before admission on January 7, 1870, and had treatment before coming into hospital. There was harsh breathing and dullness in posterior inferior thorax. Urine became diminished, albuminous and contained casts. Patient seemed dead once, when all treatment for the rheumatism was suspended and stimulants used very freely. Recovered by dint of stimulants.

"For the morbid anatomy of the affection I must refer to the autopsies in the individual cases. I will only point out that not in one was there any marked congestion of the brain; in tenth the brain is either mentioned as being normal and firm, as in Cases II and IV, or as pale and anaemic, as in Cases III and VII, or without lesion save a slight injection of the vessels of the

membranes, as in case X. The brain lesion, or rather the state of the vessels, in Cases III and IV, is most interesting; and so is the acute degenerative disease of the kidneys in Cases I and II. I believe that both these morbid states will be found more frequently if they are closely looked for, and invite the attention of observers to these points. Some of the kidneys in the post mortem inspections here detailed were not examined with the care that, having noticed the changes, I should now bestow on them."

"In none of the autopsies did I meet with meningitis." Yet he admits that meningitis does occur; but he thinks "it is a very rare lesion; and what is called rheumatic meningitis is generally not meningitis at all but cerebral rheumatism with an absence of meningeal lesions.

"The temperature is apt to be high, the joint affection persistent, or even showing signs of increase; the breathing is rapid; the pulse frequent, compressible, and at times irregular. A cardiac difficulty may show itself distinctly as a complication, or again be wholly wanting. In some cases convulsions, in others local palsies happen, or we may have hemiplegia even suddenly developed. But these features are rare; and it is in the wakefulness and restlessness, in the stupor and delirium that we mostly find the signs of how decidedly the brain has become disordered.

"In some of the cases, hurried respiration attracted my attention without anything in the condition of the lungs or heart to account for it; occasionally, however, there is decided congestion of the lower lobes of the lungs."

A petechial eruption was observed in a few cases. "It consists of irregular dull red spots sluggishly influenced by pressure, and which may be perceptible after death. It probably depends on stagnation of the blood in the capillaries from paralysis of certain vaso-motor nerves."

"The delirium is not violent, and is rarely associated with headache. * * * It is generally worse at night; and sometimes has a strange hysterical semblance. The delirium is preceded by wakeful, dreamy nights, is generally mild, and it is during the restless nights that it shows itself most plainly. Though it may be a continuous, it is scarcely ever a fierce delirium, and is

not, as a very general rule, linked either to headache, injected eye, or vomiting. It may run a rapid course, delirium or stupor quickly ending in coma, coma in death. But ordinarily it goes on for days, the patient gradually mending or becoming weaker and weaker, and passing, perhaps, into a condition very similar to that of typhoid fever, excepting that the bowels are constipated."

Such is the clinical history of this formidable disease as observed by Dr. Da Costa. What is more natural than that, in highly hysterical patients, the delirium should assume "a strange hysterical semblance." This was noted in two females. The temperature is not given in case III. For the eleven others the average maximum temperature is 104°.

The urinary reactions published are scanty and imperfect. In cases I, II and VI, the urine was found decidedly albuminous; in case VIII that fluid was not tested during life. After death it "was found to contain a large proportion of albumen." The albuminuria existed before death, and may have existed even before admission to hospital. If we grant, as the author asks, that the kidneys became acutely diseased during the progress of the rheumatism, the state of these organs is, alone, sufficient to explain the peculiar head trouble observed in these four cases; that is to say, the stupor, delirium, and coma were simply uræmic and no more. I question whether the large hard kidney could be produced in the short time of fourteen days in case I; or the large white kidney in sixteen days in case II. Dr. Da Costa thinks the impaired action of the kidneys is proof of the rheumatism attacking them.

"This case" (case I) "is a striking illustration of the occurrence of cerebral symptoms after apparent convalescence. But it is chiefly valuable because it proves the lesion of the kidneys that may happen in acute rheumatism, and that did happen after the case had been actually sometime under observation, for the first records show that the urine was healthy. Moreover it shows in what manner exposure" (the patient had freely bathed) "may act, and explains the occurrence of suddenly developed stupor passing into coma; and I suspect that nearly all the so-called apoplectic instances of cerebral rheumatism which have been placed on record,

are of a nature which this case brings out, as indeed it suggests the explanation of many of the nervous phenomena of the malady."

"Here is another instance" (case II) "in which there was stupor as well as delirium and in which the examination, after death, showed the kidneys diseased, but not the brain." * * * "These cases" (cases I and II) "show, then, a remarkable coincidence in some of the symptoms, and tell us in what direction we are to look in instances of stupor, or stupor and delirium arising in the course of cerebral rheumatism, before we seek for the explanation elsewhere."

Prof. Da Costa tells us he saw cerebral rheumatism arise under very opposite plans of treatment, and even where no treatment is adopted. He scorns the idea of any form of treatment or any drug being the *cause*; yet, from his words, I infer that a strong suspicion lurked in his mind that certain drugs could play the part of *causation*, for he says: "I notice it in several of my cases which were treated with bromides; I see it coming on with and coming on without treatment, and the inference, therefore, is, that as it arises on such opposite therapeutical plans no drug is responsible; though of course it is evident that with certain symptoms arising some drugs had better be avoided or discontinued." No "opposite therapeutical plans" were tried in these cases, and no case was left without treatment. Indeed all received the same identical treatment except case IX, who was a private patient under another practitioner's care.

He believes "the true pathology of the cerebral disorder is to be sought in the action of the rheumatic poison on the brain, whether it does so directly or indirectly, through the changed composition of the blood or by both concurring. To these elements is often added an altered condition of the finer vessels of the brain. In other words the rheumatic poison may fasten upon the lining coat of these as it does upon the endo-cardium, and, favored by the altered condition of the blood, lead to plugging, as was so distinctly found in Case IV, and as was beginning in Case III. Occasionally it may be an embolus washed from the heart into the cerebral vessels that occasions the circulatory disorder, but more usually it is a thrombus there formed; and if in any case there be not actual obstruction, there is still

circulation of altered blood, which, moreover, is apt to be still more vitiated by the impaired action of the kidneys—itself another expression of the rheumatic poison seizing upon an internal organ. The common condition of the brain tissue in cerebral rheumatism is that of nutrition interfered with, and of anaemia; and where rheumatic endocarditis or pericarditis co-exist, this may show itself all the more quickly."

"A peculiar modification of meningitis occasionally sets in during the progress of acute rheumatism. The invasion is sudden, is accompanied by great fear of impending death, is followed by delirium, and often ends fatally—sometimes very rapidly so." —Tanner, Pract. Med., Sixth Ed., Vol. 1, page 345.

M. Bouchert says: "The serious complication of acute articular rheumatism called cerebral rheumatism is only—as proved by pathological anatomy and by the ophthalmoscope—a form of meningitis. Examination of the membranes of the brain reveals a considerable venous stasis with an opaline infiltration of pia mater, caused by numerous leucocytes * * * * * Rheumatism of the brain is ushered in by delirium more or less violent, terminating by coma or by asphyxia, sometimes very rapid which may cause death in a few hours."

There is no cellular tissue in the brain upon which the rheumatic poison can "fasten." The membranes, particularly the dura mater, which anatomically most closely resembles the tissues usually attacked in acute articular rheumatism, are the structures, within the cranium, liable to be involved. Then we should have the *délire foudroyant* of Virchow—intense delirium, convulsions, followed by rapid coma and death. "Mild, good-natured delirium" with meningitis would be very pleasant indeed. That cerebral rheumatism is ever due to embolism of the cerebral vessels is extremely doubtful. Emboli washed into the cerebral vessels in size or number to give rise to symptoms cause, usually, sudden convulsions, loss of consciousness, etc. Such is what is sometimes seen after ligature of the common carotid artery. Such, too, are the symptoms observed by me in cases of undoubted embolism of the cerebral vessels. The convulsions, etc., are due to the sudden deprivation of blood to a considerable part of the brain—to temporary anaemia of that

part with consequent loss of function. Why should embolism during the course of acute articular rheumatism give rise to different results?

To suppose the "lining coat" of the cerebral vessels may be attacked, as Dr. DaCosta asserts, like the endocardium, while the endothelium of the vessels of the rest of the body escapes, lacks proof. There is no difference between the endothelium of the cerebral vessels and that of the general system. How then can he account for the exemption in the latter vessels. Besides, there is no anatomical identity in the endothelium and in the endocardium. Can the poison attack the brain tissue proper, and not give evidence, post-mortem, of such implication? We have altered blood in all cases of rheumatism, yet how seldom do we see cerebral trouble.

In *diagnosis*, Dr. DaCosta considers it very important to distinguish the exact form of cerebral disturbance present. Some of those developed suddenly and formerly called apoplectic, he attributes to uræmia, while others are due to emboli washed from the heart into the cerebral vessels. Where hysterical delirium is marked, he thinks the condition is "plugging of the arteries of the brain from rheumatism affecting them, and not from heart disease." Where the delirium is fitful with a typhoid state, he thinks it is cerebral rheumatism with "anaemia of the brain." "Sometimes the symptoms are so truly typhoid that we ask ourselves whether such cases ought to be classed with cerebral rheumatism; would it not be better to regard them as 'typhoid rheumatism,' and to view the cerebral symptoms in the same light as we do those of the low fevers?" "In looking further at the diagnosis of cerebral rheumatism, we must not forget that the cardiac lesions may produce head symptoms."

The prognosis is very grave.

Treatment.—"Where we can, the treatment for the rheumatic symptoms must be continued, and in a form that shall not be depressant; hence I do not think the bromides ought, as a rule, be employed, which I did for a time, until I understood the meaning of the cerebral symptoms better." I might ask why the bromides were employed at all? Has bromide of ammonium —the salt employed by Dr. Da Costa—any curative value in

acute rheumatism? Has any writer recommended its use in rheumatism? Not that I am aware. Nor do I think it possesses any curative power in such disease. It is depressant; it was not discontinued at all, but persistently employed to the last, even with Case XII, in which that drug was given until the patient appeared dead. It was then set aside and stimulants used liberally and boldly until the patient rallied and finally recovered under stimulants. Of stimulants, Dr. Da Costa thinks highly, and regrets not having used them more freely.

The treatment pursued in these eleven cases, when contrasted with the usual methods or with cases where no treatment is adopted, does not commend itself to others for imitation. In *twelve cases* "allowed to pursue their course under favorable hygienic circumstances, uninfluenced by therapeutic interference, the mean duration of the disease was twenty-six days, the minimum being twelve, and the maximum fifty-six days," says Dr. Austin Flint. In Dr. Da Costa's *eleven cases* (Case IX is omitted as being chronic) the minimum is sixteen days, the maximum sixty-five, with an average of forty-one days. This is far in excess of Dr. Flint's cases without treatment.

Closely examining these twelve cases of "cerebral rheumatism," the first was an instance, clearly, of Bright's disease in which hebetude, stupor, suppression of urine and death followed the usual course. The cause of death, as well as the peculiar "head symptoms" noted during the last illness, was explained by the discovery, post mortem, of the large, hard kidney. The brain was not examined. It is difficult to understand why the case is classed as one of cerebral rheumatism, when the pathological condition characteristic of Bright's disease was proved. Were not the delirium, stupor, and coma due to the state of the kidneys? And is it not just possible that the organic lesion of the kidneys was the cause of the rheumatism? This case, then, must be excluded.

In Case II there was albuminuria, granular and oily casts, and diminution of urine. Post mortem, the lungs were congested (hypostatic?); the kidneys large, pale, and in a state of fatty degeneration. This case, too, must be excluded, for it is another instance in which the peculiar cerebral condition can be

attributed, and justly so, to the state of the blood owing to the kidney disease, as the autopsy so clearly proved. I think Prof. Da Costa goes out of his way to explain the "head symptoms" in these cases, on the hypothesis of cerebral rheumatism, when the explanation is given by the cases themselves in the organic disease of the kidneys. How does Dr. Da Costa diagnosticate these as instances of cerebral rheumatism? How does he differentiate between delirium, stupor, and coma occurring in the course of Bright's disease, and cerebral rheumatism, when his only data for calling these cerebral rheumatism were the stupor, delirium, and coma? Pneumonitis would appear to have complicated Case V. In Case VI also there was albuminuria on admission, with the pale, puffy face so indicative of Bright's disease. The kidneys were not examined microscopically. In Case VIII the urine was not tested during life; some drawn from the bladder after death was highly albuminous. Of course it was so before death. I think these two cases were likewise instances of organic lesion of the kidneys, and the delirium, stupor and coma were due to the state of these organs—to uræmia. In Case IX, Dr. Da Costa himself believes embolism of some cerebral vessels was the particular form of intra-cranial lesion present. There is insanity in the family; the patient, a lady subjected to severe trials, became insane, in which condition Dr. Da Costa saw her in consultation. Surely this case is not entitled to be called cerebral rheumatism. Case XI manifested "no cerebral symptoms" whatever. I cannot understand why the case is given in this paper at all.

Excluding, then, Cases I, II, VI, VIII, IX and XI as not being "cerebral rheumatism" at all, we have six cases which closely resemble each other. All were instances of acute, articular rheumatism receiving the same treatment. Taking the entire eleven cases treated in hospital, eight died and three recovered. Of the eight who died the brain was not examined in two; the brain alone was examined in two; no autopsy was permitted in one; and a general post mortem examination was made in three. Dr. DaCosta himself admits the autopsies were not as carefully made as they should be. Deduction from partial exam-

inations cannot, obviously, be reliable nor valuable. As far as they went they revealed no organic disease of the brain.

The eleven patients were treated with bromide of ammonium, a neutral salt, and given in doses of twenty grains every two, three or four hours. It is quite remarkable that, though all the patients were several days—a few even weeks—sick before coming into hospital, yet nevertheless, neither delirium, stupor nor coma appeared before admission. These symptoms invariably appeared after the use of the bromide, in from four days the shortest, in a feeble-minded female, to twenty-four days the longest period after its exhibition had been commenced. This I consider a very important fact and the key to the whole trouble. It is also remarkable that in the cases in which the use of the bromide was persevered with, all died; that when it was discontinued at a comparatively early stage of the delirium, etc., as in Cases V, XI and XII, and acetate of potass., although only a remote, alkaliac remedy, substituted, the urine was soon found alkaline and maintained so by the use of the same drug, all three cases recovered. Stimulants, no doubt, contributed their share towards recovery.

Out of the eleven cases no less than six manifested some pulmonary trouble or complication. In Case II the lungs were congested; in Case III there was dullness on percussion, feeble respiratory murmur and cough; in Case IV there was cough; in Case V rapid breathing, oppression in chest, "fine râles and faint friction at lower part of right lung; both lungs were congested." In Case VII there were sonorous râles in posterior thorax and hypostatic congestion found post mortem. Case XII had dullness and harsh breathing posteriorly.

Wakefulness, delirium, stupor, pulmonary complications, such as hurried respiration and congestion of the lungs and paralysis of the sphincters shown by involuntary micturition and defecation in bed, are prominent features of Dr. DaCosta's cases. When the nutrition of the brain is lowered, as occurs in anaemia of that organ, it is hardly necessary to say the mental, motor and sensory functions are all more or less interfered with or perverted; that the peculiar delirium, coma, etc., observed by Prof. DaCosta are just that kind which capillary anaemia of the brain

produces. He himself had a suspicion that the delirium might be caused, in the manner stated, by the bromide of ammonium, for he says: "I notice it in several of my cases which were treated with bromides;" and thinks the bromide of ammonium is one of the drugs which "had better be avoided or discontinued" since it is a decided depressant. But what caused the anaemia of the brain? Was it the bromide of ammonium? I think so.

Garrod, Meuriot, Amory, and especially Brown-Sequard have concluded from their experiments, "that bromides contract all the blood-vessels, producing anaemia of the brain and spinal cord and so diminishing the excitability of these organs." Experiments show that the bromides are vaso-motor stimulants, especially to the capillaries, and that the contraction of these vessels is due to the stimulation of the vaso-motor system. Bromides affect the reflex function of the cord only. They depress the sensory nerves, hence tickling, pinching and pricking of the soles of the feet give no evidence of sensation. They exercise a depressing influence upon the motor ganglia of the heart, lessen the frequency and force of the contractions of the heart and finally arrest it in diastole. "Diminished sensibility, followed by complete anaesthesia of the soft palate, uvula and upper part of the pharynx is the first symptom that the patient is getting under the influence of the drug," says Bazaïre. Bromides induce general complete paralysis; they render patients low-spirited. Dr. Clark and others consider the well-known hypnotic effect of the bromides is due to the anaemia of the brain induced by these salts. Too much anaemia, Dr. Clark tells us, after experiments on himself, induces wakefulness, while a less degree produces sleep. It is well known that bromide of potassium produces an acneform rash, eczema, and spots resembling erythema nodosum.

To my mind Prof. DaCosta's cases show very clearly the physiological and the toxicological effects of the bromide of ammonium. The restlessness, sleeplessness, palseies, delirium, stupor and coma, except where due to organic disease of the kidneys as already pointed out, were due, I think, to the persistent use, in full and frequent doses, of the bromide of ammonium. I cannot, therefore, agree with the distinguished professor that the cases published were "cerebral rheumatism" at all. Bromide of

ammonium is, in my opinion, clearly contra-indicated in acute articular rheumatism, since it is a powerful depressant, and possesses neither curative nor palliative value in that disease.

We may thus sum up the action of the bromides. They act as

local sedatives, diminishing and, in large doses, arresting muscular action and irritability. By direct contact they lower and paralyze nervous excitability in general, but more especially that of the glosso-pharyngeal nerves. They weaken and finally arrest the respiratory movements. They lower the action of the heart in a remarkable manner; cause diminution of the caliber of the capillary vessels, and, through the capillaries, act on all organs and tissues supplied by these vessels. They are eliminated through the saliva and urine and also through the skin in lesser quantity, giving rise to an erythematous eruption. In fine, their chief action being that of a vaso-motor stimulant, and such action being produced by direct contact, their effects will be chiefly manifested in those organs with which their contact will be most prolonged, that is, those through which they are eliminated. Hence their special action on the throat and on the urino-genital organs.

SUMMARY OF THE CASES.

CASE.	DISEASE BEGAN.	ADMITTED TO HOSPITAL.	DELIRIUM BEGAN.	DISEASE LASTED.	RESULT.
I.	Dec. 15, 1871.....	Dec. 26, 1871.....	Undetermined.....	30 days.....	Died Jan. 9, 1872.
II.	Feb. 18, 1871.....	Feb. 25, 1871.....	On 21st day of treatment.	24 ".....	" March 13, 1871.
III.	April 13, 1872.....	April 25, 1872.....	On 4th "	16 ".....	" April 29, 1872.
IV.	Jan. 14, 1872.....	Jan. 18, 1872.....	On 17th "	14 ".....	" March 2, 1872.
V.	May 2, 1873.....	May 3, 1873.....	On 11th "	14 ".....	Recovered.
VI.	Nov. 12, 1873.....	Nov. 13, 1873.....	On 23d "	6 ".....	Died June 17, 1873.
VII.	Feb. 21, 1872.....	Feb. 23, 1873.....	On 7th "	6 ".....	" Jan. 14, 1874.
VIII.	Undetermined—chronic	March 4, 1872.....	On 24th "	27 ".....	" March 30, 1872.
IX.	March 9, 1872.....	Private	Became insane.....	Chronic muscular.	Recovered.
X.	Jan. 17, 1870.....	Jan. 26, 1870.....	On 23d day of treatment.	65 days.....	Died May 4, 1872.
XI.	Jan. 7, 1870.....	None.....	On 6th day of treatment.	21 "	Recovered.
XII.	Jan. 1, 1870.....	Jan. 7, 1870.....	On 6th day of treatment.	60 "	

DR. M. O. JONES, for the last four years a resident practitioner in this city, has removed to his old home in Pittsburgh, Pa. During his residence here he won the confidence and esteem of all with whom he became acquainted.

Clinical Reports.

ARTICLE V.

Iodide of Ethyl in Asthma.

I have recently had a very satisfactory experience with this remedy in an obstinate case of asthma.

The patient is a youth about fifteen years old, who inherits instability of nervous action from both parents. He has had obstinate attacks for six years past, especially during the spring and summer months.

The only complete relief he has heretofore had has been by change of residence. He has tried about all the remedies that have been suggested, such as nitrate of amyl, chloral, morphia, bromide, belladonna and galvanism, without benefit. Partial relief was obtained for some time by smoking a portion of the following combination, which in some cases has acted well:

R. Dracenti radi. pulv.....	5j
Stramonii foliae pulv.....	5j
Lobeliae pulv.....	5vj
Potassii nitratis pulv.....	5ss

M.

In the attack that commenced this spring this recipe seems to have been of but little service. I therefore ordered him, as recommended by Prof. Lee of Paris, inhalation of the iodide of ethyl. The preparation used was made by Nesrek of Darmstadt and imported by E. H. Sargent & Co. of this city.

After several trials we found the effective dose to be six drops. This relieved the paroxysms as if by magic and no unpleasant symptoms followed its use. The only new sensation there seems to have been experienced was occasionally a slight sense of numbness

in the feet and hands. Under its daily use the intervals between the paroxysms have grown longer and the severity of the attacks has been relieved.

It may be well to add that for some time past, previous to the use of the iodide of ethyl, I had been giving him iodide of potassium with tonics, but the surprising effects upon the paroxysms was clearly due to this new remedy for asthma.

DANIEL R. BROWER, M.D.

ARTICLE VI.

A Case of Superfœtation.

Mrs. G. aged 20, primapara, married about ten months, was taken with slight labor pains on the evening of April 18th.

I was called at 3 o'clock p. m. on the 19th; after a short but severe labor she was delivered of a healthy, full-termed female child of about five pounds weight. The placenta was delivered without any unusual difficulty. I called on the following morning and found the patient in good spirits and free from pain.

About 9 o'clock p. m. on the 21st, while using the vessel, there passed from her a complete, unruptured sac containing a male foetus, and placenta, in appearance of about four months gestation. (We have the foetus in our possession.) The following afternoon saw her in an easy and painless condition.

She has made a rapid recovery, and the child is healthy. Upon questioning her she stated that she had her menstrual flow for three or four months after she was aware of her pregnancy. A close inspection revealed no evidence of a double uterus.

Playfair in his "System of Midwifery" page 162, quotes from Tyler Smith as follows:

"A young married woman, pregnant for the first time, miscarried at the end of the fifth month, and some hours afterward, a small clot was discovered, inclosing a perfectly healthy ovum of about one month. There were no signs of a double uterus in this case. The patient had menstruated regularly during the time she had been pregnant." To this the author adds:

"This case is of special interest from the fact of the patient

having menstruated during pregnancy—a circumstance only explicable on the same anatomical grounds which render superfoetation possible. So far as I know, it is the only instance in which the concidence of superfoetation and menstruation during early pregnancy has been observed."

We find that eminent authors, as Churchill, Ramsbotham and Hunter, claim that superfoetation is impossible.

We are inclined to the belief that Playfair's explanation on pages 162-163 bears us out on the opinion that this is a true case of superfoetation.

D. A. WALDEN, M.D.

BEATRICE, Neb., June 18, 1880.

THE active state of the constrictor cervicis muscle is in the period of gestation, during which process it is transformed into the constrictor oris uteri, but in the dormant condition of the unimpregnated uterus this muscle becomes very often like an idle individual, mischievous, converting by morbid compression the veins underlying it, not into mythical, but into actual closed Pandora boxes. From the very beginning to the end of pregnancy, the life of this muscle is evolution and growth, and its office that of a support, whereby it is prepared for a supreme effort during and after parturition; but in the dormant state of the unimpregnated uterus its slow, feeble, and stealthy, but persistent, contractions are, when they occur, always morbid. The relation this constrictor muscle bears to the veins of the cervix, and the agency or *vis morbi* it possesses of becoming by closing them a *causa morborum*, thereby producing multiform diseases, have never, so far as is known, been even hinted at, much less described, by any medical, surgical, or physio-pathological writer.
—*T. H. Buckley in his Notes on the Anatomical Relations of the Uterine Structure.*

Society Reports.

ARTICLE VII.

AMERICAN MEDICAL ASSOCIATION.—THIRTY-FIRST ANNUAL MEETING, HELD IN THE CITY OF NEW YORK, JUNE 1, 2, 3, AND 4, 1880.

The American Medical Association has held its thirty-first annual meeting, and has adjourned, leaving the record of a very pleasant social event and a fairly successful scientific gathering. The number of delegates was unprecedentedly large. By the evening of the second day 1,152 had registered, and the total number of delegates and visitors together was probably over 1,500. The country was well represented in all sections. The number of foreign visitors, however, was extremely small. Mr. Joseph Hutchinson, of Liverpool, Mr. Jonathan Hutchinson, of London, Dr. Ercolani, of Bologna, and Dr. Dillon, of Dublin, were the only persons from across the water whose names I saw mentioned. There were several medical gentlemen from Canada and South America, however. More than a hundred persons were made members by invitation.

THE ARRANGEMENTS

for the work and entertainment of the guests were well made, and everything went off smoothly, except the registering of delegates. It took nearly two days for this to be completed, and there was much inconvenience and delay occasioned. The programmes of the work were published daily, instead of one for the four days, as heretofore. This did not suit the Association evidently, for it passed a resolution to have a single programme for the general sessions of the next meeting. A novelty in the way

of medical journalism was the publication of a daily edition of *The Medical Record* containing a full account of the previous day's proceedings. This display of journalistic enterprise was commended by a vote of thanks from the Association to Dr. G. F. Shrady, the editor of *The Record*.

The meetings were held in the large hall and other rooms of the Young Men's Christian Association, and in the amphitheater of the College of Physicians and Surgeons, which is close by. The work was organized at first, as usual, in one general session and five special sections. In addition, however, on the second day, a temporary section on diseases of children was created, and by a vote of the Association this section was made permanent and was regularly officered for the next meeting.

THE SOCIAL PART

of the programme was a conspicuous one, and likely to be remembered as extremely pleasant. New York is the metropolis of our country, and some pride was felt that the entertainment of her guests should be worthy of the city. On the evening of the first day a reception was given at the Academy of Music. Music by Graffula and a supper by Delmonico were the special attractions. It seemed as though everybody went and took their friends. Two immense halls were crowded, and when the supper was served, were especially lively. The amount of salads, strawberries, ices, cakes, confectionery, sandwiches, lemonade, and iced coffee which was made to pass through peptonizing and endosmotic processes must have made the heart of the caterer quail. But there was enough, be it further recorded to the credit of the committee of arrangements and Mr. Delmonico. A large number of prominent medical men were on the floor, and a few of the laity watched the scene with interest. There were comparatively few ladies and but half a dozen grand toilets.

The next evening was taken up with an entertainment at Booth's theater, given by Messrs. Reed and Carnicks, Scott and Bowne, the New York Pharmacal Association, and others. Mr. Booth acted Iago in Othello. The cast was an excellent one, and the play was doubtless much enjoyed by the many who rarely have an opportunity to see our greatest tragedian in one of his best

characters. Thursday evening was given up to receptions by several private citizens and by the Mayor of the city. Mr. August Belmont received in the art gallery which forms part of his house. His collection of paintings is one of the best in the city, and his kindness in opening it to the medical profession was doubtless duly appreciated. The rooms were crowded the whole evening. Drs. Fordyce Barker and T. Gaillard Thomas received in the Academy of Medicine. On Friday afternoon, after the final adjournment of the meeting, there was a steamboat excursion up the Hudson, up the East river, and then down to Coney Island, where a lunch was served. This gave the guests an opportunity to see all the notable sights about New York. The excursion was given by Messrs. Wm. Wood & Co., to whom a vote of thanks was tendered during the trip.

THE BUSINESS DONE

by the Association was not very great, but all the questions that could well be disposed of were attended to. The Committee on Prize Essays announced that only one paper had been handed in and that it did not deserve a prize, so that none was given. As has been mentioned, a Section on Diseases of Children was created.

Considerable discussion was aroused by an attempt to exclude the naval delegation from the floor. An unsigned protest against its admission was sent to the Judicial Council, it being alleged that, a quack remedy, Holman's Liver Pad, had been bought and used by the Medical Department. It was voted to admit the delegation. Considerable discussion took place over a suggestion made by the President to substitute a periodical medical journal in place of the transactions, after the manner of the British Medical Association. The committee to whom the matter was referred, reported that it was better to wait the law of growth, and advised no immediate action in the matter. A committee of five will further examine into the matter and report at the next meeting.

The report of the Committee on Ozone consisted of a letter from Dr. N. S. Davis, its chairman, saying that it had been as yet, impossible to obtain satisfactory and reliable data upon the

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subject. He asked for \$200 to continue the investigation, and it was given.

The constitution was so amended as to allow one delegate from the United States Marine Hospital Service.

The subject of the Metric system was elaborately reported on and discussed. Many hard knocks were given it, but the Association stood by its position of last year, and passed the following resolutions:

First. That it recommends the teaching and practice of the Metric system in medical colleges, clinics, dispensaries, etc.

Second. That it charges its Executive Metric Committee with the duty to report annually on the above institutions which teach, and those that do not teach the Metric system.

Third. That it authorizes said committee to enter into communication with the Metric Committee of the British Medical Association, in order to concert such plans as may render the use of the Metric system simultaneous and uniform in both countries.

Dr. Theophilus Parvin, chairman; Dr. Edouard Seguin, secretary; Drs. Edward Wigglesworth and F. R. Weisse, Executive Metric Committee.

The report of the Librarian showed that there were 3,258 volumes in the library; \$200 was voted for continuing the librarian's work.

The following gentlemen were appointed delegates to European Medical Societies: Drs. Beverly Cole, Cal.; Benj. Lee, Philadelphia; M. A. Pallen, New York; and L. D. Bulkley, New York.

The committee appointed to consider the project of establishing a medical journal consists of Drs. W. W. Dawson, O.; J. R. Bronson, Mass.; W. H. Pancoast, Pa.; N. C. Husted, New York; J. S. Green, N. J.

The delegates to the Canadian Medical Association are: Drs. C. N. Brush, Buffalo; James R. Leaming, New York; D. H. Goodwillie, New York; Wm. Brodie, Detroit; W. B. Ulrich, Pittsburg.

A committee was also appointed to try and secure the official position for the members of the medical staff of the United States Navy, which is their due.

The subject of the Abuses of Medical Charities was referred to a committee consisting of Drs. Benj. Lee, H. G. Piffard, S. W. Gross, and J. W. Green.

The Treasurer's report showed the receipt of \$5,025, and a balance in the treasury of \$579.50.

An honorarium of \$1,000 was granted the Permanent Secretary.

The following resolutions, sent up from the Section on State Medicine, were adopted :

First. Indorsing the National Board of Health.

Second. Recommending medical schools to establish a chair of State Medicine as part of the regular curriculum.

Third. That the name of the section shall be "Section on State Medicine."

Fourth. That the Committee on Prize Essays shall be Drs. S. E. Chaillé, La.; J. L. Cabell, Va.; and A. N. Bell, New York.

The following officers were elected for ensuing year :

For President—John T. Hodgen, M.D., of St. Louis, Mo.

For Vice-Presidents: *First*—W. H. Anderson, M.D., of Mobile, Ala. *Second*—Levi G. Hill, of New Hampshire. *Third*—Henry T. Holton, of Vermont. *Fourth*—H. Carpenter, of Oregon.

For Permanent Secretary—W. B. Atkinson, M.D., of Philadelphia, Pa.

For Secretary—Dr. W. H. Bradford, of Boston.

For Assistant Secretary—Dr. J. G. Cabell, of Virginia.

For Committee of Publication—The same as last year : Drs. W. B. Atkinson, T. M. Drysdale, Wm. Lee, R. J. Dunglison, Albert Fricke, S. D. Gross, and Casper Wistar, all of Philadelphia.

For Chairman of the Section on Diseases of Children—Dr. S. Jacobi, of New York.

For Treasurer—R. Dunglison, M.D., of Philadelphia, Pa.

For Librarian—William Lee, M.D., Washington, D. C.

For Chairman of the Section on Practice of Medicine, Materia Medica and Physiology—Dr. Wm. Pepper, of Philadelphia.

For Secretary—Dr. T. A. Ashby, of Maryland.

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For Chairman of the Section on Surgery and Anatomy—Dr. H. McGuire, of Richmond, Va.

For Secretary—Dr. D. A. Eve, of Tennessee.

For Chairman of the Section on Obstetrics and Diseases of Women—Dr. James R. Chadwick, of Boston, Mass.

For Secretary—Dr. J. Taber Johnson, of Washington, D. C.

For Chairman of the Section on Medical Jurisprudence and State Medicine—Dr. J. T. Reeve, of Wisconsin.

For Secretary—Dr. R. G. Young, of Arkansas.

For Chairman of the Section on Ophthalmology, Otology, and Laryngology—Dr. D. S. Reynolds, of Kentucky.

For Secretary—Dr. S. M. Burnett, of Washington, D. C.

For Members of the Judicial Council, to fill vacancies—Drs. J. K. Bartlett, of Wisconsin; F. Staples, of Minnesota; D. R. Wallace, of Texas; J. S. Billings, of U. S. Army; J. H. Warren, of Massachusetts; and A. T. Woodward, of Vermont.

The Committee recommended that the next meeting of the Association be held in the City of Richmond, Va., on the *first Tuesday* in May, 1881.

As Chairman of Committee on Arrangements—Dr. F. D. Cunningham, of Richmond, Va.

During the course of the sessions a resolution of condolence was voted to the President for his recent great bereavement in the death of his son. The usual resolutions of thanks to the various persons who had contributed to the success and enjoyment of the meeting were also passed.

THE ADDRESS

by the President and the Chairman of the various sections formed prominent features of the general sessions. The opening address of welcome, by Dr. T. Gaillard Thomas, was a particularly eloquent and appropriate one. He referred to the changes that had passed over the country since the Association met in New York, sixteen years ago, and spoke of the wealth which New York had lavished upon its hospitals and charities. In conclusion he said that the end and object that brought the Association together was to emit and absorb thought, to give one another friendly greeting, and the hand-shake, and the kindly interchange

of expression, and to advance the interests of a profession which most closely allied man to his Maker. Let it be hoped that the work done in the Association would lead those who tread in our steps to say, they met those who, like Ben-Adhem, loved their fellow-men, and strove earnestly in their cause. "In the name of the united profession of the city of New York and with outstretched hand and a glowing heart, I bid you welcome, thrice welcome to our home."

THE PRESIDENT'S ADDRESS

was most interesting in those parts where he took up practical points and discussed them. He began by congratulating the Association upon the marked improvement in numbers, work and kindly feeling among its members. He then went over some of the contributions to surgery and medicine which America had made, and showed that the reproach of having done nothing in this department is no longer deserved. The merits of the Metric system were thoroughly discussed.

A letter from Dr. J. B. Hamilton, Surgeon-General of the U. S. Marine Hospital Service, was read. This gave unqualified testimony to the value of and practical workings of the new system. Dr. Hamilton stated specifically that (1.) No serious difficulty had attended the adoption and exclusive use of the Metric system. (2.) That no mistakes had occurred through the usage. (3.) That volumetric methods were retained. He suggested that volumetric methods should be retained wherever the system was adopted.

The subject of the publication of the Transactions needed consideration, as there was great dissatisfaction with the present method. The plan of establishing a weekly periodical similar to the *British Medical Journal*, was broached. The history of the growth of the British Medical Association, and its rapid increase in prosperity after the establishment of a large journal, was given. Dr. Sayre was inclined to look favorably on the American Association undertaking a similar journal. In case this were done, the importance of having it well done and of having a competent man as editor, was insisted on.

The addresses by the

CHAIRMEN OF THE SPECIAL SECTIONS

Were all of considerable interest but were, none of them, remarkable performances. Neither did they cover the ground generally expected of them, that of noting the progress in the different branches of the sections upon which they were chairmen.

Dr. J. S. Lynch, of Baltimore, Chairman of the section on Practice of Medicine was not able to resist the general craze for discussing the importance of preventive medicine. He began by congratulating the association on the general good health of the country, a kind of congratulation that is apt to fall rather flat on an assemblage of doctors. The pathology of yellow fever was touched upon. The germs of this disease he said, were peculiar in the fact that they were not active when first emitted from the body, but required a certain time for development. Considerable evidence was given to support this statement. It being true, there was always time to destroy these germs when a case of yellow fever appeared, before they reached their stage of activity. Dr. Lynch referred to the possibilities of preventing or lessening scarlatina, diphtheria, consumption etc. He then went over the subject of antipyretics, and made an eloquent conclusion, describing the present position and triumphs of medicine.

The address of the chairman of the section on Surgery and Anatomy was devoted entirely to the subject of Preventive Trephining. After giving the history of trephining, he said that there were three different views held by surgeons on the subject: 1. That the trephine should never be used; 2. That it should be used simply to cure, *i. e.*, to relieve symptoms already developed; 3. That it should be used as a prophylactic to prevent the probable onset of symptoms. Dr. Briggs defended the third view, and urged the use of the trephine as a preventive. Dr. B. did not think trephining dangerous if done before the secondary effects of traumatism developed. In extensive comminuted fracture of the skull, the surgeon should not wait for symptoms of compression or inflammation to develop. The results of thus waiting and then operating are about as bad as of not operating at all. On the other hand, statistics show that prompt trephining for prevention of symptoms gives the best results. Of 106 cases, two-thirds had been saved by preventive trephining. In

forty-two cases thus operated on by Dr. B., thirty-eight had recovered. He stated as essential to success, that there should be full antiseptic precautions, the use of the conical trephine, entire removal of all loose fragments of bone, and perfect drainage of the wound.

The address of the chairman of the section on State Medicine, Dr. James F. Hibbard, of Richmond, Indiana, was a very able and pertinent one. It has not however, so much of general interest, and I refer to it briefly. Dr. Hibbard stated, under the head of hygienic progress, that there had been published 1,525 documents on public hygiene during 1879, against 459 in all previous time; a statement that appears rather incredible. In discussing medical jurisprudence, Dr. Hibbard took ground against death by hanging, and mentioned the fact that Judge Heller, of Indianapolis, had for the first time, sentenced a man to be hung on Wednesday instead of Friday. The rest of the address was devoted to various problems in psychology and psychiatry.

THE WORK OF THE SECTIONS

began in the afternoon and lasted generally until five or six o'clock. The surgical section showed the most enthusiasm, and loquacity, twice keeping up its discussions until seven o'clock. Here as in other sections, there were a good many papers of practical value read and much instructive comment excited. Very few papers indeed, however, could take any high rank as showing elaborate study or rigid scientific method. One feature of the papers was that quite a number had been read or had appeared in substance before.

THE SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA AND PHYSIOLOGY

of which Dr. J. S. Lynch, Baltimore, was chairman, and Dr. W. C. Glasgow, of St. Louis, secretary, opened with a paper by Dr. Wm. H. Thomson, of New York, on

THE CLASSIFICATION OF MEDICINES.

Dr. Thomson is Professor of Materia Medica in the University College here, and he presented views on classification which he

has for many years been teaching. He thought that all drugs may be assigned to one of two classes. The first-class includes those drugs which, whatever the dose, shows their special effect at once. Opium, emetics, cathartics, neurotics are examples of this class. They act immediately, producing symptoms; they affect functions rather than organs or structures. They show their effects equally upon sick and well. The other class includes those drugs whose action is not immediate, or if it is, it is not remedial. They produce their therapeutical results slowly. They do not produce symptoms, or if they do, they are not acting remedially. Iron, iodide of potassium, mercury and arsenic are examples of this class. They affect structures rather than functions; they produce their special effects on the sick only. The first of these two classes he called symptom-medicines because they were, as a rule, to be used in combatting symptoms and perverted functions only. The second class he called restoratives or disease-medicines, because they acted against the disease itself. It was laid down as a rule that when symptom-medicines were not given to the point of producing symptoms, they were not given in large enough doses. On the other hand, when disease-medicines were given in so large doses as to produce symptoms, the patient was getting too much. The symptom-medicines are those which are required in nearly all acute affections, as fevers, etc.; the disease-medicines were for chronic diseases.

The discussion on this paper was shared in by Drs. Roberts, Bartholow and Mary Putnam-Jacobi. Dr. Bartholow doubted the correctness of the classification and instanced cases where "symptom-medicines" did cure disease and where "disease-medicines" produced symptoms. Dr. Mary Putnam-Jacobi was the first woman who has spoken before the association. Her appearance excited much interest among the delegates, who crowded about her and listened with great attention. Dr. Putnam-Jacobi is a little woman with a pleasant face, a low voice and an entirely feminine manner. She disagreed with Dr. Thomson and made the point that the action of all drugs is molecular and hence is really structural; furthermore, that we already know what this molecular action is as far as some drugs are concerned, for example the alkaloids. It was impossible, therefore, to make any classifica-

tion based upon the assumption that some remedies affect function, others structure.

Dr. M. O'Hara read a paper entitled "A Case of Occlusion of One or more of the Cerebral Sinuses." A young woman developed quite rapidly œdema of the right and then left side of the face, severe neuralgic pains, conjunctival ecchymosis, ocular protrusion and paralysis of the right sixth nerve. The case was carefully analyzed and the probability of thrombosis assured.

Rather more work was done upon the second day, the session opening with a paper by Dr. H. R. Hopkins, of Buffalo, N. Y., on

SPHYGMOGRAMS WITH NOTES OF AUTOPSIES.

The reader acknowledged the past deficiencies of the sphygmograph but predicted great things from its future careful study with perfected instruments. The idea at the basis of his paper was that a large number of chronic diseases have characteristic sphygmographic tracings, and by learning these the diagnosis could be helped. He showed a large number of sphygmograms, made by himself, illustrating the pulse in Bright's disease, locomotor ataxia, endarteritis, etc. A modification of Pond's sphygmograph was used. A large number of post mortem notes was read.

A paper of much practical interest was that of Dr. Robert W. Taylor, of New York, on the use of

CHRYSOPHANIC ACID IN THE TREATMENT OF SKIN DISEASES.

The author indorsed the drug as having as much specific effect in some cases as quinine. He recommended it in chronic or subacute skin affections where there is superficial infiltration and in scaly diseases, lichen, papular and scaling syphilides, some forms of eczema, indurated acne; but above all psoriasis is benefited by the remedy. The strength should be about gr. x to $\frac{3}{j}$ of simple ointment. The objections to the acid are its irritant and staining properties. It is not anti-pruritic.

One of the best papers read before the section was that by Dr. Wm. Pepper, entitled

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A FURTHER CONTRIBUTION TO THE LOCAL TREATMENT OF PULMONARY CAVITIES.

Dr. Pepper referred to the all but total uselessness of inhalations and sprays in the treatment of pulmonary cavities. In his experience it was very rare indeed to see these heal up. Any method which might help this was to be regarded with favor, therefore. He had tried the direct injection of Lugol's solution (m. x, m. xv, or 3j to 5j) in seventeen cases; 291 injections were made in all. The results had been encouraging and he intended to continue the practice. In several post mortems on the cases, he found that the cavities had healed up. The patients all had confidence in the treatment. He had seen no ill effects and he believed it certainly demonstrated that the injections could be made with safety. The special indications for the operation were the presence of well defined cavities with not much osseous tissue about them.

In a rambling paper by Dr. J. R. Uhler of Baltimore "On Restorative Medicines" an ingenious method of

MEASURING UREA

was described. It consists in taking two bottles, one of which just fits into the other. The smaller one is attached by a wire to the cork of the larger. In the smaller is placed the urine; in the larger a mixture of liquor sodæ chlorinatæ and salt. The one is placed carefully in the other and both are weighed. They are then shaken up and the contents of the two bottles mixed together. Chemical decomposition takes place and the nitrogen of the urine is set free. This is allowed to pass off and the two bottles are again weighed. The difference in weights represents that of the nitrogen; from which can be estimated that of the urea.

The session of the third day was opened by Dr. A. D. Rockwell of New York with a paper on

THE ELECTRICAL TREATMENT OF EXOPHTHALMIC GOITRE.

Dr. R. said that the Faradic current was of some value in this disease when applied by the method of general Faradization. The main reliance, however, must be in the galvanic current. In

giving this the cathode is placed over the cilio-spinal center and the anode in the auriculo-maxillary fossa; the anode, after a few minutes of stable treatment, is drawn along the inner border of the sterno-cleido muscle to its lower extremity. The current is then reversed and increased in strength. Of nine cases treated this way, four completely and three partially recovered.

A very practical paper was read by Dr. L. Duncan Bulkley of New York on the

USE OF SULPHUR AND ITS COMPOUNDS IN DISEASES OF THE SKIN.

Pure sulphur is given internally in few skin diseases, but is beneficial when there is eczema of the genitals and about the anus. Sulphide of calcium is of considerable value in the more pustular forms of acne, in hordeolum, furunculosis and suppurating buboes. The drug is liable to be poor. Dose, gr. $\frac{1}{2}$, q. i. d. Dr. Bulkley had no data which enabled him to indorse the natural sulphur waters. Externally, sulphur is most potent as a destroyer of parasites (*e. g.* animal and vegetable) as those of scabies, favus, ringworm and *tinea versicolor*. Pure sulphurous acid is the best form for these. Sulphur baths were probably of not much more value than ordinary local applications of sulphur. The discussion that followed this paper turned largely upon the sulphide of calcium. Some asserted that it interfered with digestion. On the whole the value of the drug was indorsed.

Dr. V. P. Gibney read a paper on the "Strong Galvanic Current in the Treatment of Sciatica." By giving the current as strong as the patient could bear it for ten minutes every day for a week or two, he had entirely relieved 24 out of 32 cases.

Dr. L. Turnbull read a paper on "Hydrobromic Ether." There was not time for hearing it all, however.

THE SECTION ON SURGERY AND ANATOMY

was opened with a paper on "Spinal Extension; its Modes Means and Motives," by Dr. Benj. Lee, of Philadelphia. It embraced ideas which he had to some extent given to the public before. He showed his surgical table, by which systematic extension can be made by the patient himself.

PHIMOSIS AS A CAUSE OF NERVOUS SYMPTOMS

was the title of a paper read by Dr. Geo. M. Beard, of New York. There were, he said, a number of nervous symptoms which were either caused or kept up by phimosis and sometimes even by adherent and redundant prepuce. Some of these symptoms are: morbid fears, flushings, persisting flushings, sweating of the hands, palpitation, muscular twitchings, etc. Sometimes phimosis exists without producing symptoms until the system gets run down. Circumcision helps to relieve the condition, but immediate or startling results are not to be expected. Out of 80 cases of neurasthenia, 31 had phimosis or adherent and redundant prepuce.

In the discussion upon the paper additional cases were related showing the effect of phimosis on the nervous system. Dr. Hard of Illinois said that he had advised circumcision in cases of insanity. This had been sometimes done merely to make an impression on the patient and had been practiced where the prepuce was not redundant.

A paper was read by Dr. John T. Hodgen, of St. Louis,

ON SECTION OF THE INFRA-ORBITAL AND INFERIOR DENTAL
NERVE FOR NEURALGIA.

The speaker described a hook or elevator by which he drew out the nerve, and thus made the section further back. The full details were then given; but they have been published in part before, and need not be given here. Dr. H. had operated twenty-four times on twelve patients. All were greatly relieved; some were entirely cured. In the discussion that followed, Dr. Jas. R. Wood described his own method of operating in such cases. He cut through the walls of the antrum, and cut the nerve on the proximal side of Meckel's ganglion. That ganglion ought to be removed, he thought, in order to secure success. Even then, in the majority of cases, the disease would return.

Dr. Chas. T. Stillman, of Plainfield, N. J., read a paper on "Newly Devised Orthopedic Appliances, including the Sutor splint."

Dr. Pancoast, of Philadelphia, read by title a paper on

CERTAIN METHODS IN SURGERY AND CONSIDERATIONS OF THE
ETIOLOGY AND PATHOLOGY OF WHITE SWELLING OR SYNOVITIS
OF THE JOINTS, IN REGARD TO THE PRACTICE OF EXTENSION
IN TREATMENT.

He then spoke on various surgical topics. He showed samples of black silk which he preferred for sutures, because the white silk commonly contained lead salts. He described his method of amputating at the metacarpo-phalangeal articulation. He always employed the volar flap, and his success was invariably good. He showed a urethrotome; in using this, he made shallow cuts and then dilated. Twenty-one cases had been successfully treated with the new instrument. In regard to joint affections, the two points insisted on were that cartilage did not become inflamed, but that the chief seat of the disease was the synovial membrane; that the essential point in treatment was to relieve the synovial membrane, rest and not extension, and to relieve the articular cartilages. Extension might even make matters worse. Along with rest the more efficient revulsion was the hot iron.

The discussion turned upon the puncture of joints. Dr. Martin spoke of its freedom from danger. He had made 240 exploratory articular punctures in which he had purposely abstained from antiseptic precautions and had never found the slightest symptom of inflammatory reaction.

In a paper by Dr. Jas. L. Little, of New York, read on the second day on "Compound Complicated Hare-lip," several successful cases were related. The intra-maxillary bone was removed in the two instances, with the best results. In the discussion, instances of operating for hare-lip four and eight hours after birth were cited and early operations commended.

CYSTOTOMY AND CYSTITIS IN THE MALE,

was the title of an admirable paper by Dr. Robert F. Weir, of New York. The credit of originating the operation was given to Dr. Willard Parker, who announced it in 1867. Dr. Weir had collected forty-seven cases, of which thirteen died, ten deaths being due to advanced kidney disease; twenty-three were cured, seven were relieved, and four were not benefited. The operation consists in cutting into the bladder, preferably by the lateral

incision, and in keeping the opening patent, at first with the finger daily inserted, afterwards with a tube. Dr. Weir advised removal, if possible, of enlargement of the prostate, if that existed.

Dr. Gouley, in discussing the operation, said that no patient would get well after cystotomy unless there had been a free division of the urethro-vesical orifice.

Dr. Turnbull read a paper on "Skin Grafting." During its discussion, Dr. Burchard mentioned a case in which 200 grafts had been taken from an amputated thigh three hours after its removal, and inserted into an immense ulcerated surface over the breast of a woman. A stimulus was imparted to the edge of the wound by this. Afterwards, 500 more grafts were put on the wound, with considerable benefit.

In a paper on the Treatment of Intestinal Obstruction, by Dr. W. A. Byrd, of Quincy, Ill., the following conclusions were reached: No one should be allowed to die from intestinal obstruction without at least an exploratory incision. If there is great tympanitis, the intestines should be aspirated. In cases where abdominal section is contra-indicated, an artificial anus should be formed.

THE PATHOLOGY AND TREATMENT OF SYPHILIS

was the title of a paper by Dr. F. N. Otis, read on the third day. Dr. Otis' views, as there given, have been announced before, although not as fully and exhaustively as at this time. He believes, essentially, that the virus of syphilis is not a physical entity, but an influence. This "influence" causes excessive local accumulations of leucocytes, which in turn cause the sclerosed lesions and symptoms of the constitutional disease. The object of treatment must be to get rid of this excessive cell accumulation. Small doses of mercury long continued helped this.

A paper, "On the Development of the Osseous Callus," of high scientific value, was read by Dr. H. C. Marcy, of Cambridge. He stated that there was no such thing as primary union of bone. The interest of the paper was increased by the exhibition of some beautiful microphotographs.

In a paper on "Lupus," by Dr. H. G. Piffard, of New York,

the disease was classed among the scrofulous skin affections. He divided it into three forms: the non-ulcerative, the superficial ulcerative, and the deep ulcerative. He treated it with thorough excision and subsequent application of the actual cautery, or chloride of zinc.

A paper on "The treatment of Syphilis," by Dr. Chas. R. Drysdale, of London, Eng., contained no especially new ideas. The same may be said of some remarks by Dr. Martin on the value of his Elastic Bandage.

A paper having some novelty was that of Dr. H. T. Campbell, of Augusta, Ga., "On the Radical Cure of Inflammation by Ligation of the Vessels of Supply." The title of the paper shows the author's idea. He related seven cases of inflammations affecting the lower extremity and eight of the arm in which he had ligated vessels. The results were all satisfactory, sometimes surprisingly so.

Owing to lack of time five other papers were read by title only, and referred to the committee.

THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN

was presided over by Dr. G. M. B. Maughs, of St. Louis, in the absence of the regular Chairman, Dr. A. H. Smith. The Secretary was Dr. Robt. Battey, of Rome, Ga.

The first paper was by Dr. J. Marion Sims, of New York, on "Battey's Operation in Epileptoid Affections." Dr. S. believed that Battey's operation would soon be recognized as a legitimate one. The speaker had performed it eleven times. He now reported the results of the last four. The first was on a married woman, aged 30. She had suffered many years from dysmenorrhœa, and of late years from epileptic attacks during menstruation. She had, when examined, vaginismus, vaginitis, retroversion, stenosis of the cervical canal, and both ovaries were enlarged and tender. After the operation she was perfectly well. The second case was one of hystero-epilepsy in an unmarried female of 31. She had suffered constantly for many years from pain radiating from the pelvic organs, and from dysmenorrhœa. She also had a retroverted uterus and tender ovaries. The operation relieved her from pain, but she is still weak. The third

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case was also one of hystero-epilepsy, and the patient died, from the bromide of ethyl, as Dr. Sims thinks; from the operation, as Dr. Turnbull thinks. The fourth case was that of an unmarried female, aged 21. She had had convulsions with occasional intermissions ever since the age of $10\frac{1}{2}$. The aura started from the uterus and radiated toward the ovaries. She did not lose consciousness. The operation was performed last January, and did not seem to do much good.

Dr. Sims always performed the operation by making an abdominal incision. The uterus is meanwhile held up by an elevator thrust into its cavity and, the peritoneum being opened, the ovary is seized, its pedicle ligated and the organ removed.

In the discussion that followed, the opinion was developed that an operation through the vagina was safer, but sometimes when the ovary was bound down it could not be removed that way, hence success was not so certain.

Dr. M. A. Pallen read an essay on the same subject, but discussed it more exhaustively, giving the history, etc. Dr. P. had operated four times and conceived the operation independently of Dr. Battey, but a short time later than that gentleman. He had operated three times: for epileptiform dysmenorrhœa, hystero-epilepsy and for persistent catalepsy in the insane. The second case only recovered and was somewhat improved.

The second day's session was opened with a paper by Dr. Jos. Tabor Johnson, of Washington, on the

MANAGEMENT OF THE THIRD STAGE OF ABORTION, WITH RETENTION OF PLACENTA AND MEMBRANES.

The point made in the paper was that the patient ought not to be left until the uterus was completely emptied and firmly contracted. This point was indorsed by several gentlemen who followed in discussion. Dr. Morris, of Baltimore, "speaking for the men of the past generation," said that he thought the placenta should be allowed to remain so long as no injurious effect resulted. Two other gentlemen agreed with this speaker.

Dr. Isaac E. Taylor, of New York, read a paper on "Gastro-Hysterotomy; being Remarks on and Exhibition of a Full-term Uterus, Removed by Laparotomy." The patient had a deformed

pelvis, and had been delivered by gastrotomy five years before. In this case Dr. Taylor had first delivered the child by Cæsarean section ; he had then passed two ligatures around the uterus, about an inch apart, between the cervix and the body of the uterus, where he believed there was a ductile isthmus. He then cut off the uterus between the two ligatures. The patient did well, except for an attack of phlegmasia dolens. She recovered from this ; but on the twenty-seventh day died of cardiac thrombosis. Dr. Taylor believed the death had nothing to do with the operation. He spoke strongly in favor of it. Out of fifty cases so far reported, twenty-one had recovered.

Dr. T. Gaillard Thomas, of New York, read a paper entitled, "Clinical Contributions to the Subject of Removal of the Uterus, in Whole or in Part, by the Extirpation of Tumors Connected with that Organ." There are three conditions, he said, which justify removal of the uterus : malignant disease ; as an addendum to Cæsarean section ; and in order to render practicable the removal of tumors which take their origin in its tissues, or which, arising in the ovaries, have attachments to the uterus too close to be separated. It was of the third class of conditions that he wished to speak. He related some illustrative cases. In one the fundus, in another the body, and in the rest the whole uterus was removed. Of the seven, four recovered. The three fatal cases were all those of large, solid fibroid tumors. Of the four successful cases, one was a large, solid fibroid, one a fibro-cyst, and two were ovarian cysts, extending down into the broad ligament, and having a large amount of solid material in the walls. It was concluded that the fibro-cystic tumors whose size could be diminished by tapping, offered the best chance of success, since they allowed shorter abdominal incision.

On the third day the first paper was read by Dr. Addinell Hewson, of Philadelphia, on

THE TREATMENT OF FIBROIDS OF THE UTERUS BY DRY EARTH.

Dr. H. had been studying this subject for twelve years. He had treated fifty cases ; in all of them he had had satisfactory results ; in some complete cure. The material employed was a fine yellow clay, such as is used in making the best Philadelphia

brick. This was first moistened, so that it would fit better; a layer a quarter of an inch thick was then placed around the abdomen and back, covered with a thin sheet of cotton batting, and secured by a many-tailed bandage. Almost immediate relief from pain was secured, tenderness disappeared, and great reduction in the size of the abdomen soon took place. In a case related, the size diminished one-half in three weeks. In a case that died, while under treatment, from an intercurrent affection, a large fibroma of the uterus was found undergoing cystic degeneration. Dr. Hewson thought that the action of the earth was a chemical one. Ordinary potter's clay would not do so well.

Dr. B. F. Dawson, of New York, read a "Clinical Report on a Modified Operation for Cystocele." In this operation he folds the redundant anterior vaginal wall into the bladder. The other steps were much like those of Schroeder's operation described in 1876.

Dr. Robert Battey, of Rome, Georgia, related a "Case of Still-birth, with Resuscitation After Two Hours and Five Minutes." Dr. Battey did not think a child should be regarded as dead because its heart had ceased to beat. In the present case, the child was wrapped in hot flannel, while he made inflation by the mouth.

Dr. Beverly Cole, of San Francisco, made some remarks on the preparation of sponge-tents. These called from Dr. M. A. Pallen a strong expression of disapproval of the use of sponge-tents.

THE SECTION ON OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY has for its chairman, Dr. Lawrence Turnbull, of Philadelphia; for secretary, Dr. Eugene Smith, of Detroit. There were several excellent papers read before this section. Dr. W. H. Daly, of Pittsburg, Pennsylvania, read a paper on "A Case of Syphilitic Stenosis of the Larynx, with Fibrous Adhesive Bands of the True Vocal Cords; Tracheotomy; Rupture of the Bands; and Cure of the Stenosis by General and Local Treatment." The title of the paper indicates the character and history of the case, which was not discussed. In a paper on the "Lesions of

the Larynx in Pulmonary Phthisis," Dr. Carl Seiler, of Philadelphia, asserted that the ulcerative process begins in the glands and not in the mucous membrane. Dr. S. did not believe that the larynx should be considered a separate local habitat of the phthisical disease.

Dr. Knapp, of New York, read a paper on "Tumors of the Lachrymal Glands; their Pathology and Treatment, with Demonstrations." A number of cases were cited. He believed that all those tumors begin as adenomatous growths; unfrequently their character becomes mixed, a considerable part being myxomatous.

In a paper read the second day by Dr. W. H. Daly, "On the Therapeutical Value of the Galvano-Cautery in Diseases of the Naso-Pharynx," the opinion was given that this form of cautery is surer and less painful than other kinds, but is more expensive and capricious. It would not probably become popular.

A paper by Dr. S. J. Jones, of Chicago, "On the Introduction of liquids into the Eustachian Tube and Middle Ear," elicited considerable discussion. Dr. J. introduces slightly saline injections into the middle ear by means of a Eustachian catheter, and believed them of value in dry, chronic, non-suppurative inflammation. Drs. Knapp, Holcombe and Pomeroy, disagreed with the reader; Drs. Ritchey, Chisholm and Noyes, of Detroit, agreed with him as to the use of these injections.

On the third day Dr. B. Joy Jeffries spoke on "Color Blindness." He said he had examined 185 of the delegates and found five color-blind.

Dr. David Hunt, of Boston, read a paper on "The Variability of the Human Eye," and ventured an opinion that myopia often was the result of embryological changes brought about by the course of development. Dr. E. Gruening, of New York, exhibited a "Magnet for the Removal of Particles of Steel and Iron from the Interior of the Eye." Dr. T. R. Pooley, of New York, read a paper on "The Detection of the Presence and Location of Pieces of Steel and Iron in the Eye, by the Indicator of a Magnetic Needle." The author formulated the following conclusions: 1st. That a steel or iron body in the eye may be detected by a suspended magnet when the body lies near its surface. 2d. The presence and position of such a foreign body may most surely be

found by making it a magnet by induction, and then testing for it by a minute suspended magnet. 3d. The intensity of deflection of the needle is proportionate to the depth of the body. 4th. Changes of deflection of the needle indicate changes of position in the foreign body. The instrument used is a magnetized needle suspended by a silk thread.

Dr. E. S. Peck, of New York, related an interesting case of "Primary Conjunctival Lupus."

THE SECTION ON STATE MEDICINE,

as it is now called, had for chairman, Dr. Jas. F. Hibbard, of Richmond, Indiana; and for secretary, Dr. Thos. F. Wood, of Wilmington, North Carolina. The opening paper was by Dr. C. R. Drysdale, of London, England, on "Death-rate of the Rich and Poor." Dr. D. asserted that it was poor wages more than anything else which caused large death-rates among the poor. He also asserted that the death-rate among the poor should be lowered, and that it should be considered immoral for a poor man to have a large family. Papers were read by Dr. J. S. Billings, on "The National Board of Health," and by Dr. E. H. Parker, of Poughkeepsie, on "The Relations of the Medical and Legal Professions to Criminal Abortion." The latter advocated the full penalty of the law for abortionists, and urged that the prevalent idea that abortion is not a grave offense should be counteracted in every possible way. Dr. A. N. Bell read a paper on "Unsanitary Engineering," which caused considerable discussion.

On the second day a paper was read for R. C. Kedzie, of Lansing, Michigan, on "The Temperature of Living-Rooms;" and one by Dr. A. L. Carroll, of New Brighton, New York, on "The Personal Factor in the Etiology of Preventable Disease."

The third day was taken up to some extent with the discussion and passage of two resolution. The first, offered by Dr. J. S. Billings, was as follows :

"*Resolved*, That this Association approves of the plans proposed by the Superintendent of the Tenth Census for the collection of data with regard to the insane and idiots of the United States, and that it urges upon physicians that they should aid in this work, as far as possible, by carefully replying to the schedule

of queries on this subject which will be sent them from the Census office.

The second was an indorsement of the National Board of Health. "A Report on the Intervention of the Physician in Education," was read for Dr. D. R. J. O'Sullivan, of New York. It urged more attention to the sanitary condition of school-houses and the health of the pupils.

Dr. J. V. Quimby, of Jersey City, read a paper on "The Criminal Use of Chloroform." He stated among other things, that it had been shown by experiment that persons could be chloroformed while asleep without being awakened. Papers were read by Dr. W. H. Lathrop, of Tewkesbury, Massachusetts, on "Thoughts Regarding Alms Houses," by Dr. Antisell, of Washington, D. C.; on "Suspicions of Poisoning;" and by Dr. W. F. Thoms, of New York, "On Humane Societies."

THE SECTION ON DISEASES OF CHILDREN

was a new organization and no papers had been prepared especially for it. Very good work was done by those who took part however, and it had a fair-sized audience. It was organized with Dr. S. C. Busey, of Washington, D. C., in the chair, and Dr. Frank Woodbury, of Philadelphia, secretary. Dr. A. Jacobi, of New York, made an opening speech and advocated the claims of pediatric medicine. He made a distinction between the necessity of studying the specialities and practicing them. Alluding to the growth and encroachments of the various specialties he said: "The general practitioner will in future obtain, as the legitimate province of his practice, the male half of mankind, and very old women, and very young children, provided he will keep his hands off their eyes, ears, nervous system, lungs and heart, urinary organs, venereal diseases, nose, pharynx, larynx, skin, hair and corns." He pointed out the fact that the multiplication of specialists is due, first, to the immense progress of the science; and, secondly, to the attainment of special skill and dexterity by certain individuals, that leading them to select certain branches as their favorite practice."

Dr. S. C. Busey then read a paper on "Bright's Disease of Children Caused by Malaria. He related three cases in which children

who had suffered some time from malarial poisoning, subsequently had Bright's disease. He did not insist positively upon their being a relation of cause and effect, but believed that the sequence should be kept in mind. Dr. Jas. L. Green reported a case of "Congenital Multiple Lymphectasia," in a male born at eight months. There was a large cystic tumor upon the posterior portion of the pelvis. On the abdominal region in front were two other smaller tumors. Two days later the fluctuating tumor was aspirated and 120 grams of fluid removed, which was clear, straw colored, specific gravity, 1007, slightly saline, and albuminous (about $\frac{1}{2}$) on boiling; nothing but a few blood corpuscles were observed under the microscope. In ten days the sac refilled to its former size. Dr. A. Jacobi now saw the case and pronounced it one of lymph angiectasis, and recommended removal of a small portion of the fluid, and injection of a small amount of iodine. On two subsequent occasions this operation was repeated, very little disturbance being produced; the slight uneasiness of the child passed away in two hours. This tumor has considerably diminished in size, but the tumors in front, upon which no treatment was attempted, have increased, and a small one has been developed upon the left hip opposite the acetabulum.

On the discussion, Dr. Jacobi said that since the tumor is now smaller than at the beginning, the tincture of iodine injections should be continued, and more frequently repeated, being careful, however, not to excite too much febrile reaction in the child. He distinguished two forms, one in connection with lymph trunks, and the other isolated. In the former the injection of iodine is the best treatment; the latter kind may be extirpated, and he had twice dissected out such isolated tumors in adults.

On the third day, Dr. A. Jacobi read the history of a case of "Congenital Atrophy of the Liver."

In speaking of the case, Dr. Jacobi also reported a case of syphilitic liver which had recovered—the only infant that he had known to survive the disease. The child is now a year old, and appears to be healthy.

In the treatment, where the evidence of syphilis appears early, a prompt mercurial impression is required, and he had followed

Lewin's plan of giving the bichloride hypodermically, with excellent results. The salt was dissolved in water and filtered before using. In other cases, where such a rapid effect is not needed, he had followed the usual plan of mercurial inunction.

Dr. Jacobi also reported

A CASE OF SUPRAPUBIC LITHOTOMY

in a child, six years of age, which had suffered with the symptoms of stone in the bladder for a year.

The operation was performed without difficulty, under chloroform, and a medium-sized phosphatic stone removed. This was followed by persistent suppuration, which was more than would be expected simply from a mucous membrane. The case had not yet entirely recovered.

In discussing the case, Dr. Jacobi referred to recent observations upon sub-mucous gastric abscess, and inquired whether a similar condition could not exist in the bladder. These accidents of peritonitis and extensive suppuration, as a consequence of epicystotomy, may prove to be a serious bar to a method of operation for lithotomy that otherwise has much to commend it. It may be that the preliminary distention of the bladder required, may have injurious results in a bladder which is contracted, and the subject of concentric hypertrophy and chronic irritation from the presence of the stone. If the bladder be much diseased, the forced injection may of itself produce serious consequences. In the case reported, no injury or irritation of the bladder was caused in operating, beyond the simple incision.

One or two other cases were also reported to the section and discussed.

THE Faculty of Rush Medical College have changed the time allotted to their practitioners' course, and have announced that the lectures for post-graduates will be given in the month of April next year, after the annual winter session is completed.

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Domestic Correspondence.

ARTICLE VIII.

PHILADELPHIA LETTER.

Messrs Editors:—An event of much interest, not only to the profession of this city but of the country at large, is the recent capture—red handed, so to speak—of one of the chief manufacturers of bogus diplomas, the notorious “Dr.” Buchanan. The credit of this successful effort to entrap a wary and experienced swindler is due to the enterprise of the *Record*, a penny daily paper of this city, the proprietors of which furnished the funds needed to set the machinery of law in motion. A reporter detailed by the proprietors for the purpose has spent several months in collecting the necessary evidence, and the account of his experience published with perhaps an excusable flourish of trumpets in his journal, furnishes much matter of interest.

Although the fact that Philadelphia has for some time been the center of the diploma trade is generally known, the causes which have favored this nefarious traffic, and the obstacles to its removal, are not, perhaps, so widely understood. It may not be amiss, therefore, to give some account of the rise and progress of some of these institutions. One of the oldest is in possession of a charter granted to the Pennsylvania Medical College, started some twenty-five or thirty years ago by a brilliant group of young men, most of whom subsequently became distinguished. After a brief but creditable career the institution came to an end during the late war and the faculty were scattered. What became of the charter at the time no one knows, but it was next found in the possession of some of the men who have since made a traffic of its reputation and have involved our reputable medical col-

leges, particularly the time-honored University of Pennsylvania, which, owing to the similarity of title has been frequently confounded with it, in unmerited disgrace, especially among foreigners. In fact as our minister to Germany remarked in his communication on the subject a few months ago, the expressive "Philadelphia degree" is even a by-word, and forms part of the furniture of a quack in popular plays. How long ago the actual sale of degrees began is not exactly known, but it became more and more a recognized business, until the "University" dwindled gradually down to little more than an office for the printing of diplomas and the transaction of correspondence connected with the traffic. After some years two sister institutions made their appearance on the scene. The "Philadelphia University of Medicine and Surgery," and the "Eclectic College." Buchanan has been the ruling spirit of the latter. Several years ago an attempt was made by the combined authorities of the University of Pennsylvania, and the Jefferson College, to bring the offenders to justice; however, not only this but subsequent efforts came to naught, the legal proceedings seeming to mysteriously fail at some point. Emboldened by impunity the diploma sellers pushed their business in foreign countries as well as in the United States, and within the last year or so several new "diploma mills" have been started. A month or two ago, however, some check was given to the traffic by the arrest of parties connected with the "Philadelphia University of Medicine and Surgery," and about the same time stimulated by the publication of Minister White's letter from Germany, the State legislature authorized the investigation of the charters of these institutions but failed to appropriate any money for the purpose of carrying on the investigation. It was about this time that the enterprising proprietor of the *Record* took the matter in hand, and in connection with the officials of the General Government, and of the State of Pennsylvania, decoyed the diploma manufacturers into the toils of the law. The reporter who undertook the work of detective, ascertained in the first place, that in addition to the three "colleges" above mentioned, no fewer than five others were at work, two of which were also situated in or near Philadelphia. From these various institutions he managed to obtain five diplomas of M.D.,

one degree of D.D., one of LL.D., and one of D.C.L., for the aggregate sum of two hundred and twenty-five dollars. In order to obtain these degrees various devices were employed. In one case the reporter assumed the character of a quack, printed circulars referring to his lung and liver cures, and enclosed them from Tippecanoe City, Ohio, with a letter to "Dr." Buchanan, and asking if a diploma could be procured by "writing an elaborate thesis," or by taking a three weeks' course, and expressing a willingness to "foot the bills for any risks that might be incurred." A reply from the "Dean of the Eclectic College" was soon received, and before long the correspondent was, on payment of seventy-five dollars, put in possession of no less than three diplomas. A trifling informality by which one was dated the year before the establishment of the institution granting it added to the interest. At the same time a correspondence in the name of a clergyman of Virginia was started with a view to obtaining the degree of D.D., and others. This was so successful that five diplomas, two of the M.D., one of D.C.L., one of D.D., and one of LL.D., were enclosed to a single address on payment of one hundred and forty dollars. These were captured by the United States agents, in the mails, and on the evidence thus presented, "Dr." Buchanan was arrested on the charge of using the mails for improper purposes, and was safely lodged in jail by the United States court, where he now languishes; it being apparently less easy to slip through Uncle Sam's fingers than those of our municipal and State authorities. Meanwhile, the enterprising reporter, not content with this exposure, was carrying on several other schemes for entrapping the diploma mongers, one of which is most amusing as recited by the "chief actor."

It appears that among the more recently fledged institutions of learning which have been created in this city is one known as the "Philadelphia Electropathic Institution." The building occupied by this learned body is a plain, three-story house, with a small sign on the front door, which your correspondent has read on passing many times in the last fifteen years without suspecting the latent possibilities concealed behind so unpretentious an exterior. In fact, for many years there was nothing more to be seen inside than an ordinary waiting room and office filled with

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batteries. But the recent successes of Buchanan had incited the proprietors of the establishment to follow in his footsteps, and advertisements appeared in the papers offering instruction and diplomas. Under the guise of a countryman the reporter applied for instruction and attended the "full course" of the institution, comprising seven lectures, each about an hour in length, and each reiterating what had previously been said on the "Theory of Electricity." At the end of a week the "professor" said he was going out of town and that the course of lectures would now be closed. The student was provided with a work upon medical electricity and a copy of Cutter's Anatomy. One week's reading with a lecture on the "winker" muscles of the eye concluded the course, and having prepared a thesis, the student was examined, the questions being as follows: "How would you diagnose?" "How would you treat a headache?" "How would you treat a case of eruption?" "How would you treat neuralgia?" "What would you say if some one came in your office and said, 'electricity is nothing?'" The reporter's answers to these questions were so satisfactory that the professor assured him with effusion that he "had grasped the philosophy and treatment better than any student they had had," and, on payment of one hundred and thirty dollars the "right hand of fellowship" was proffered the newly fledged graduate and an elaborate diploma (given in the *Record* in fac simile), was presented him, declaring him, in sonorous latin phraseology, "In Electro-Therapeuticis Magistrem." It is estimated that the profits of this institution from the sale of diplomas must range from three to four thousand dollars a year. The law seems powerless to prevent the establishment of these institutions; all that could be done in this case when the charter was applied for a few months ago, was to reduce the power of giving degrees, so that only that of master in electricity might be granted instead of doctor, as was desired. Three or four similar institutions have applied for the power of giving degrees during the past few weeks, and had not a check been given to their proceedings by this exposure, it is likely we should have been overrun by a small host of "diploma mills" before the close of the year. The fact is that the abortive attempts to expose and punish the diploma vendors have simply

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served to advertise them as sources and this city as a center at which such degrees could be obtained. The profession of this city has been blamed for not taking more active steps to ferret out and destroy this nefarious traffic, but in extenuation it must be said that previous attempts having failed through what appeared to be the connivance of the municipal legal authorities, no new efforts could be made so long as the fountain of justice itself seemed to be poisoned and the officers of the courts, to all appearances, in league with the guilty parties. An incident may be mentioned in illustration of the impudent boldness with which these bogus diplomas were flourished under the noses of the public. It is said that when Buchanan was a candidate for some petty office in his ward, medical diplomas were freely offered among the colored population with the view of influencing that vote.

In capturing the "faculty" of the Electric Medical College recourse was had to the United States authorities as being more certain than those of the municipality or State, although some of the latter assisted. The charge upon which Buchanan was arrested was that of using the United States mails for purposes of fraud, and when the officers of the law, armed with the evidence afforded by the enterprising reporter of the *Record*, entered the "college" the "dean" was discovered surrounded by piles of signed and unsigned diplomas, the seals of the various learned institutions under his charge and a mass of correspondence bearing on the diploma traffic. Thus far no responsible bail has been offered, and Buchanan is still in jail, but what will be the final result of the case is very difficult to say. The charge under which he has been committed does not touch the character of his institution, and it is very much to be feared lest, when the penalty of this misdemeanor has been paid, the business will once more be resumed, unless advantage shall be taken of the opportunity now afforded to have the charter revoked. Among the "faculty" of the "Electric Medical College" is one name, that of Charles G. Polk, which some of your readers may remember in connection with "glycerite of kephaline," a mess concocted by this worthy and lauded by him in all the journals so long as he could obtain admission to their columns. The true character of

the compound and its author were well shown up by Dr. Samuel R. Percy, of New York, until he became generally known, when he left the ranks of the regular profession and turned quack.

We have had two medical (or surgical) sensations since my previous letter, the audiphone and bromide of ethyl. The former of these I may have mentioned. It was much talked about for a time, and some of the daily journals contained the papers read before the County Medical Society, a species of advertisement more glaring than any heretofore practiced in this locality. Otolologists, I believe, united in speaking lightly of the advantages of the audiphone, but possibly the objects of its promoters were attained in the temporary notoriety gained by its general advertisement in connection with their names. At any rate it was soon dropped. Bromide of ethyl has also, it seems, had its day. Brought forward, in part, by the persons by whom the audiphone had been *exploited*, it has already been the cause of one death in the hands of a prominent surgeon of the city, and seems likely to become very unpopular.

PHILA.

IF pepsin is dissolved or suspended in any fluid of neutral reaction its power of digestion is interfered with; that means, it cannot show its full strength. If, however, the solution is made alkaline, the pepsin at once becomes inert—it loses all power to change albumen into pépton. The proper relation between some kind of acid—hydrochloric or lactic to be preferred—and the pepsin is an essential condition to bring out its digestive power, and, in therapeutics, the good effects of pepsin. Not only as an exception, but we well might say as a rule, we find in looking over prescriptions which contain more or less of pepsin, that the practitioner tries his best to combine pepsin with a variety of vegetable or mineral substances in such a manner that it cannot show its digestive power at all. Nothing is more common than to see pepsin combined with subcarbonate or subnitrate of bismuth, and yet, it can easily be shown that the addition of even the latter salt to artificial gastric juice will interfere with the digestion of egg albumen. Bicarbonate of soda, the different preparations of iron, strong alcoholic tinctures, and elixirs are incompatible with pepsin.—*Kretzschmar.*

Reviews and Book Notices.

ARTICLE IX.—THE TREATMENT OF PUERPERAL SEPTICEMIA BY INTRA-UTERINE INJECTIONS.—By Edward W. Jenks, M.D., LL.D., Chicago, Ill. Reprint from Vol. IV, Gynæcological Transactions, 1880.

This is a paper presented to the American Gynæcological Society by the author, on a very important subject. The reprint before us is a beautifully printed pamphlet of twenty-four pages. The author first gives a full, but concise and interesting history of the practice of introducing remedial substances into the cavity of the uterus for the prevention or cure of septicemia, stating impartially the opinions for and against the practice, with the dangers that have been found to accompany it. He then details the results of his own experience, illustrated by an abstract of three cases in which intra-uterine injections were used with the most marked benefit. His conclusions in reference to the whole subject are clearly and concisely stated in the following propositions which constitute the closing paragraphs of the paper:

1. In its wide-spreading relations to other causes of puerperal diseases, and of death, septicemia stands pre-eminent, for, although puerperal diseases are designated by different names, many lesions of the circulatory, respiratory, and nervous systems are the direct or indirect results of blood poisoning; therefore it is obviously the plain duty of every obstetrician to prevent the absorption of any decomposing materials from the uterus.

2. The objections, which have been made to intra-uterine injections in the treatment of non-puerperal uterine diseases, are not applicable to their use for the prophylaxis or treatment of puerperal septicemia.

3. The number of deaths attributed to intra-uterine injections have, in the majority of instances, occurred when they were used for other purposes than washing out the puerperal uterus with antiseptic fluid.

4. When a death has taken place on account of washing out the uterine cavity after child-birth with a simple antiseptic wash the fatal result has not been in consequence of the injection itself, but from the improper manner of giving it.

5. By the observance of proper precautions on the part of obstetricians this mode of treatment is rendered harmless. To secure entire immunity from danger certain requisites are important, as follows: (a) The mouth and neck of the uterus should be well dilated, and a free outlet insured for the injected fluid. (b) Air must not be admitted with the injection. (c) The fluid should be injected slowly and without much force. (d) The fluid used ought not to be of a lower temperature than the normal temperature of the body. (e) Powerful astringents should under no circumstances be injected within the uterus, as they are liable to produce contraction of the os and cervix, and thus aid in forcing the injected fluid into the tubes or sinuses.

6. The administration of these injections ought never to be intrusted to a nurse or inexperienced assistant, but should invariably be given by the accoucheur himself, with as much carefulness and attention to every detail as he would in the performance of a surgical operation.

7. Intra-uterine injections should be used invariably succeeding child-birth, if there exist any of the following conditions: (a) If there is premature cessation of the lochia with any constitutional disturbance. (b) If there exists a purulent or fetid uterine discharge. (c) Whenever there is any abnormality of the lochia, or offensive uterine discharge attended by elevation of temperature, or increased frequency of pulse. (d) When there are good reasons for believing that the uterus contains fragments of placenta, or is imperfectly contracted, and contains clots or any animal substance.

8. Intra-uterine injections should be more generally used in the prophylaxis and treatment of puerperal diseases, than has heretofore been customary, for the following reasons: (a) If

properly administered to puerperal women they are devoid of danger and capable of accomplishing results for good which cannot be attained by any other means. (b) There are no other modes of treatment or remedial agents which act as speedily in lowering the high temperature of puerperal septicemia, or accomplish better results in certain inflammatory conditions of the uterus peculiar to the puerperal state. (c) They are peculiarly serviceable in causing the expulsion of clots, or fragments of placenta, and aid in a marked manner in facilitating the rapid involution of the uterus. (d) They have diminished in a remarkable manner the number of deaths, which to all appearance were inevitable from puerperal poisoning—far surpassing in this particular any other known means of treatment.

ARTICLE X.—PAY HOSPITALS AND PAYING WARDS THROUGHOUT THE WORLD. Facts in support of a re-arrangement of the English System of Medical Relief. By Henry C. Burdett, London : J. & A. Churchill. 1879.

Although the author, having a particular object in view, addressed his book specially to the people of England, we have no hesitation to recommend it as very interesting reading to every physician of this country, to every director, trustee or committee of hospital management ; in short, to every person who is interested in the proper dispensation of medical charity. The author has evidently devoted much time to his work ; he has familiarized himself with the system of hospital management, not only in Great Britain and Ireland, but throughout the world. And, judging by the excellent description of the American systems, we infer he has mastered the details of his great subject with perfect success. The appearance of the book is very opportune at this time, when the medical profession and medical press throughout the land are discussing the great wrongs perpetrated upon our profession by the abuse of medical charity. Those who incline to the belief that the magnitude of these abuses is greatly exaggerated, will find in the statistics drawn from London hospitals the most convincing proofs of an appalling enormity of frauds which may be and are committed if the door of charity is opened indiscriminately to every applicant. Those who try to

make the faculties of medical colleges parties of these frauds by acquiescence and encouragement, will probably take their charges into reconsideration after reading this book, which shows conclusively that the abuses reach the same percentage where medical charity is not controlled by medical schools. To all who read the book attentively it must become apparent that these abuses are an inherent feature of all institutions for free medical relief; and that they spring from one common source, to-wit: from that in-born desire of all common people to get everything as cheaply as possible; which desire creates a great aversion to paying for anything they may get free of charge. That London tradesman referred to upon page 153 of the book, presented the whole truth in a nutshell by asserting "that he always gets the best medical advice for his family and himself for a shilling, instead of a guinea. He declared, and indeed boasted, that any one so minded, can get the opinion of the majority of the most eminent consultants in London, with less trouble, and in less time, by paying one shilling to the hospital porter, than by going to their private houses." Change such characters, if you wish to strike at the root of the evil !

The object of the author is "to give facts, and facts only, and to form no conclusion, to urge no scheme of reform which has not the merit to command success, after a fair trial." And after a careful review of the various systems of hospital administration of this country and Europe; after a fair exposition of their merits and faults, he comes to the conclusion to advocate to his countrymen the adoption of what he is pleased to call "the American plan;" i. e. the system of pay-beds and pay-wards in the general hospitals. "In American hospitals this system is successfully carried out by the resident medical officer or superintendent, who decides, at the time of admission, what a patient should be charged for board. All that he has to guide him in his decision is the evidence produced by the patient, and a scale of payments fixed by the governors. The superintendent cannot fix a lower rate of payments than the lowest amounts on the scale fixed by the trustees. All new cases, on the day after admission, are referred to the visiting committee, who reserve to themselves the right of refusing aid to any person who may ap-

ply for relief. This committee regulates the various grades of payment for board, medical attendance, medicine, charges in case of death or removal, and all other expenses incurred by the patient." * * * * " If all the large hospitals will give the system a fair trial; if they will each appoint a visiting committee of active, intelligent governors, on the American models, and if they will decide the proportion of free to pay beds at each institution, the thing will be accomplished."

But on one point the author justly insists: "Wherever the pay system is introduced, there must provision be made for the payment, in whole or in part, of the medical officers who attend to the paying patients. No arrangements can be considered satisfactory which do not make provision for the proper payment of the medical staff." But when will this principle be adopted or carried out by the hospital boards?

F. C. H.

ARTICLE XI.—THE LAWS OF THERAPEUTICS OR THE SCIENCE AND ART OF MEDICINE. By Joseph Kidd, M.D. "Magna est veritas et prevalebit."

This is a book of two hundred pages, the title of which reads well. One would suppose that at last we had found the one thing desired—something exact—"The Laws of Therapeutics, etc., etc." How sadly we are disappointed the following brief review will indicate:

At page fifty-four ends the first chapter, which is historical. Nothing of importance is introduced and Renouard or Dunglison state all the facts given without the numerous allusions to the "old regime," "exploded theories" and the stereotype inuendoes at the horrors of the "old orthodox distinctive medicine with its rich ornamentations of bleeding, leeching, starving, tartar-emetic and laxatives."

A few new authors are mentioned to bring the history to date, but none with quite the affection, barring a few mistakes which the author corrects, as the "illustrious Hahnemann." Very tenderly does our author refer to the far-seeing eye of genius and the improvements and modifications in the practice of medicine produced by the sharp exclusive teaching of the founder of Homœopathy.

The second chapter on physiology; the third on pathology; and the fourth on the natural history of disease, are brief, and our author rushes forward to the consideration of "Therapeutics and *Ars Medica*."

The effort is made to demonstrate that Hahnemann was a great and illustrious man in that he discovered the law of *similaris*—that he was also a very foolish man, full of mistakes, prejudices and false theories in that he indulged in speculations in regard to *psora* and *infinitessimal doses* of medicine.

Dr. Kidd says at p. 35, et seq.: "Twenty-seven years ago I saw that the essential truth of Hahnemann's law was totally independent of his speculations about dynamization. Adopting with great delight the law of '*similia similibus curantur*' as the chief, though not the only, foundation for therapeutics, I learnt for myself that Hahnemann's 'sober' teaching, the use of the pure, undiluted tinctures, was a far better guide to heal the sick than Hahnemann 'drunk' with mysticism, calling for the exclusive use of infinitesimal doses. The latter I gradually cast aside *in toto* as untrustworthy and unjust to the sick, whose diseases too often remained stationary under treatment by globules but were most effectually and quickly cured by tangible doses of the same medicines which failed to cure when given in infinitesimal doses."

A great part of the book consists in the recital of cases, which are usually prefaced by a history similar to the following: "Capt. S., aged 59, bilious temperament, etc. etc.," given up as hopeless by the *ordinary physicians in the country*. He was with difficulty removed to his mother-in-law's * * * and placed under my care." "Miss —, aged 26, of a feeble constitution, etc., etc., was attacked with a severe pain across the lumbar region. *Anasarca* came on in June, with great prostration of strength. Under *ordinary allopathic* treatment she became gradually worse, when she was placed under my care." Guided by this unerring law these patients usually make most remarkable recoveries.

Reiterating the hackneyed expressions in regard to the "partizan spirit of cliques" and the "blunders and bigotry of the old school," the author proceeded to give the latest and most scientific treatment of disease as practiced by the larger number of

the most eminent men in that school. He is, in many respects, a *modern* homœopathist.

Many of the cases are interesting and no doubt valuable, but the book is written in bad taste and will hardly add anything to the reputation of the author, whatever that may hitherto have been. The publishers have done their work well. C. W. E.

ARTICLE XII;—ENGLISH HEALTH PRIMERS. American Edition.
New York: D. Appleton & Co.

The object of these little books is to disseminate among all classes trustworthy information regarding the conditions and care of health. They are brief, simple and elementary in statement; and each primer is written by a gentleman specially competent to treat his subject. The series deals with hygienic subjects that are of vital importance to everybody, like the following: "Exercise and Training;" "Alcohol: Its Use and Abuse;" "The Home and its Surroundings;" "Premature Death;" "The Skin and its Troubles;" and other topics of equal interest. To bring these little volumes within the reach of everybody who has a few cents to spend and wishes to spend them most profitably, the publishers have put the price at the remarkably low figure of 50 cents per volume.

ARTICLE XIII.—A MANUAL OF AUSCULTATION AND PERCUSSION, EMBRACING THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART AND OF THORACIC ANEURISMS. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College. Second Edition. Henry C. Lea, 1880. Chicago: Jansen, McClurg & Co.

The first edition of this manual was reviewed in these pages a few months ago and what was then said in its commendation is equally applicable to the present volume, which differs very little from the former. The author's name is all that is necessary to recommend this work to the profession of this country.

E. F. I.

Editorial.

AMERICAN MEDICAL ASSOCIATION.

In another part of this number of the *JOURNAL AND EXAMINER* will be found a very full and excellent report of the proceedings of the recent meeting of the American Medical Association, in the city of New York. It appears to have been a very full, harmonious and interesting meeting. The only objections we have seen or heard concerning it, arose from a mistake on the part of the Committee of Registration, in providing inadequate accommodations for the prompt registration of members, and from a serious neglect to pay proper attention to the by-laws and regulations concerning the arrangement of papers and the preparation of a proper programme for the whole meeting, and the proper examination and disposal of the papers in the several sections. It is one of the curious things in human experience to note the frequency with which men selected expressly to perform certain official duties which are plainly set forth in constitutions and by-laws, fully accessible to them, go about the work assigned to them without taking the slightest pains to read even such by-laws as are particularly designed to guide their own action. For instance, the by-laws of the Association were so changed two years since as to require all persons proposing to present reports or read papers either in the general meetings or in the sections, to send such papers, or abstracts of the same, to the chairman of the Committee of Arrangements, at least one month before the meeting of the association, expressly for the purpose of enabling such committee to examine and arrange the same and make up a full programme for the annual meeting. Yet, entirely overlooking this plain provision, the committee in New York took pains to give special notice through the medical journals that all reports and

papers must be sent to the officers of the several sections, scattered throughout the Union, at the very time that they should have been sent to the committee in New York:

Of course they had no opportunity to make up and print a full programme, to be given each member when he registered his name, as the by-laws intend shall be done. We hope the Committee of Arrangements for the next meeting, in Richmond, will at least read the by-laws on this subject, as published in the *Transactions* for 1879. In regard to the proper disposal of papers in the several sections, the by-laws and ordinances, published in the *Transactions* every year for the last dozen years, give specific and plain directions. First, they positively prohibit the reference of any paper to the Publication Committee until it has been actually read and considered in the section, or by a sub-committee appointed by the section for that purpose.

Second, they require all papers read in the sections to be placed in one of three classes, namely, such as contain the results of *original* experiments and investigations of value ; such as contain so complete a résumé of what is known on a subject of importance that it leads to the establishment of practical conclusions of real value ; and such as contain more or less matter of importance, of an isolated or fragmentary character. Only papers belonging to the two first classes are allowed to be referred to the Committee of Publication, while those of the third class are to be referred back to their authors with permission to publish them in any medical periodical they may choose.

The rules further provide that any paper, either from its length or from want of time, which cannot be read and properly considered by the section, must be referred to a sub-committee of the section, with thirty days for examination and a report to the Committee of Publication.

It is thus seen, that if the officers of sections who have a whole year in which to learn the regulations of the Association, before they are called on to act, would give even a very moderate attention to the rules printed in every volume of *Transactions*, there could be no such thing as reading papers by their titles and referring them blindly for publication in the *Transactions*, as was done at the recent meeting, and has been often done before.

We have alluded to these existing regulations because some of our cotemporaries are calling for *better* regulations to cure the evils complained of; whereas, the fault is not in the *regulations*, but in the neglect to enforce them. We suggest that the best way to remedy the evils complained of, and to render the working of the sections more efficient and valuable every way, would be to make the secretary of each section a permanent officer instead of an annual one. Let a good, firm and enterprising member hold the office of secretary from year to year, and having once learned the regulations and modes of work, he would easily keep all proper rules before the meetings and secure their observance, much to the pleasure and profit of all parties.

D.

MEDICAL EDUCATION.—THE NORTHWEST STILL IN THE LEAD.

While the medical department of Harvard has been simply giving notice of an intention to add a *fourth year* to the period of medical study at a future time, which, however, was to be optional with the student, whether he should take it or not, the new St. Paul Medical College, Medical Department of Hamline University, boldly announces its adoption of a full graded course extending over *four years*, a full compliance with which is made obligatory upon all candidates for graduation. We quote from the annual announcement for 1880–81, as follows: "Instruction is given by lectures, recitations, and clinical teaching, distributed throughout the academic year, which commences on the first Tuesday in October and closes on the last Saturday in May, with a recess of ten days at Christmas.

"The course of study has been enlarged and extends over *four years*, and the examinations for a degree are divided into *four*, one to be held at the close of each year.

"All examinations, both in the regular and adjunct branches, must be passed at sometime previous to receiving the diploma.

"An examination on entrance, in the higher English branches is required."

Will the medical press of the whole country take as much pains to notice the bold and positive stand taken by the young school in Minnesota, as it has the simple declaration on the part of Harvard of an intention to do something in the future?

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, July 5 and 19.

West Chicago Medical Society—Mondays, July 12 and 26.

MONDAY.

CLINICS.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—2 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard; 3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—2 p. m., Medical, by Prof. Quine.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, by Prof. Jenks.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.